MainView for DB2 Performance Reporter User Guide

Supporting

Version 12.1.00 of MainView for DB2
Version 12.1.00 of BMC System Performance for DB2
Version 12.1.00 of BMC NGT Load for DB2 for z/OS

December 2016
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Contents

About this book 13
Related publications .................................................................13
Conventions ......................................................................14
Syntax statements ...............................................................14
Syntax diagrams ................................................................15

Chapter 1 Overview of Performance Reporter 17
Introduction to Performance Reporter ......................................17
Performance Reporter input data ..............................................20
Reports ...............................................................................20
  Data Collector reports .........................................................20
  Reports from DB2 tables ......................................................21
Processing options ..............................................................23
  Running Data Collector reports .........................................24
  Extracting data from SMF ..................................................24
  Running reports from extracted SMF data .........................24
  Loading detail or summary data into DB2 tables ..................24
  Summarizing or purging table data .....................................25
  Running reports from DB2 tables .......................................25
Performance data tables .......................................................25
  Table release dependencies and migration .........................26

Chapter 2 Data Collector reporting facilities 27
Overview .............................................................................27
Selecting the source data for reporting .................................28
  Activating optional IFCIDs for batch reporting .................31
  Writing DB2PERF and DB2AUDIT data classes to Data Collector data sets .........................32
The Dynamic Trace facility ...................................................33
Archive directory ................................................................33
  Viewing archived data sets ................................................34
  Viewing interval record details .........................................36
DOMBRPT1 utility ................................................................37
  SYSIN control statements ...............................................40
  REPORT statement .........................................................44
  INTERVAL statement and parameter .................................46
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALIFIER statement and parameter</td>
<td>54</td>
</tr>
<tr>
<td>SORT and SORT2 parameters</td>
<td>67</td>
</tr>
<tr>
<td>EXPAND statement and parameter</td>
<td>70</td>
</tr>
<tr>
<td>FILTERDATA statement and parameters</td>
<td>71</td>
</tr>
<tr>
<td>IFCID statement and parameters</td>
<td>82</td>
</tr>
<tr>
<td>RECTRACE report, statement and parameter</td>
<td>83</td>
</tr>
<tr>
<td>LINESPP statement and parameter</td>
<td>84</td>
</tr>
<tr>
<td>OUTLIM statement and parameter</td>
<td>85</td>
</tr>
<tr>
<td>GROUPMETHOD parameter</td>
<td>86</td>
</tr>
<tr>
<td>Data Collector report output</td>
<td>88</td>
</tr>
<tr>
<td>Source record trace</td>
<td>88</td>
</tr>
<tr>
<td>SYSPRINT</td>
<td>89</td>
</tr>
<tr>
<td>Sample reports</td>
<td>93</td>
</tr>
<tr>
<td>Recommendations</td>
<td>98</td>
</tr>
<tr>
<td>Finding problems with dynamic SQL</td>
<td>99</td>
</tr>
<tr>
<td>Chapter 3 SMF extract, reporting, and table update (DPRSMF)</td>
<td>101</td>
</tr>
<tr>
<td>DPRSMF job control statements</td>
<td>102</td>
</tr>
<tr>
<td>Step 1—SMF extract and file creation</td>
<td>103</td>
</tr>
<tr>
<td>Step 2—Statistics consolidation</td>
<td>111</td>
</tr>
<tr>
<td>Step 3—DB2 performance data tables load procedure</td>
<td>112</td>
</tr>
<tr>
<td>Step 4—Load into DB2 tables</td>
<td>113</td>
</tr>
<tr>
<td>Sample DPRSMF JCL</td>
<td>115</td>
</tr>
<tr>
<td>DPSUMLD control statements</td>
<td>124</td>
</tr>
<tr>
<td>EXEC PARMs for NGT Load and BMC LOADPLUS</td>
<td>125</td>
</tr>
<tr>
<td>Control statement overview</td>
<td>125</td>
</tr>
<tr>
<td>Control statement detail definitions</td>
<td>126</td>
</tr>
<tr>
<td>Example of control statements</td>
<td>140</td>
</tr>
<tr>
<td>DPRSMF return codes and error messages</td>
<td>141</td>
</tr>
<tr>
<td>DPSUMLD return codes and error messages</td>
<td>141</td>
</tr>
<tr>
<td>DPSUMLD Return codes</td>
<td>142</td>
</tr>
<tr>
<td>Informational messages for the DPSUMLD program</td>
<td>142</td>
</tr>
<tr>
<td>Warning messages for the DPSUMLD program</td>
<td>143</td>
</tr>
<tr>
<td>Error messages for the DPSUMLD program</td>
<td>143</td>
</tr>
<tr>
<td>Chapter 4 Data summary and purge process (DPRSUM)</td>
<td>147</td>
</tr>
<tr>
<td>Summarization strategy considerations</td>
<td>147</td>
</tr>
<tr>
<td>DPRSUM job control statements</td>
<td>149</td>
</tr>
<tr>
<td>Summary/purge procedure</td>
<td>149</td>
</tr>
<tr>
<td>Load into DB2 tables</td>
<td>150</td>
</tr>
<tr>
<td>Summarization/purge return codes and error messages</td>
<td>152</td>
</tr>
</tbody>
</table>
### Chapter 5  Reports from DB2 tables

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naming conventions</td>
<td>153</td>
</tr>
<tr>
<td>Areas of DB2 activity</td>
<td>154</td>
</tr>
<tr>
<td>DB2 Table report format as provided by Performance Reporter</td>
<td>161</td>
</tr>
<tr>
<td>Single buffer pool data</td>
<td>162</td>
</tr>
<tr>
<td>DB2 tables reporting facilities</td>
<td>162</td>
</tr>
<tr>
<td>Prepared reports</td>
<td>163</td>
</tr>
<tr>
<td>Custom reports and charts</td>
<td>164</td>
</tr>
<tr>
<td>Standard reporting</td>
<td>165</td>
</tr>
<tr>
<td>Ad hoc reporting</td>
<td>165</td>
</tr>
<tr>
<td>Batch reporting facility (DPRREPT)</td>
<td>165</td>
</tr>
<tr>
<td>Batch reporting facility return codes and error messages</td>
<td>169</td>
</tr>
<tr>
<td>Report customization</td>
<td>170</td>
</tr>
</tbody>
</table>

### Chapter 6  Report field definitions

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting report fields</td>
<td>175</td>
</tr>
<tr>
<td>Accelerator activity</td>
<td>175</td>
</tr>
<tr>
<td>Accelerator modeling activity</td>
<td>177</td>
</tr>
<tr>
<td>Application termination</td>
<td>177</td>
</tr>
<tr>
<td>Average service units</td>
<td>179</td>
</tr>
<tr>
<td>Buffer pool activity</td>
<td>180</td>
</tr>
<tr>
<td>Data capture</td>
<td>183</td>
</tr>
<tr>
<td>Data sharing</td>
<td>184</td>
</tr>
<tr>
<td>Drain/Claim</td>
<td>187</td>
</tr>
<tr>
<td>Dynamic SQL (optimization)</td>
<td>188</td>
</tr>
<tr>
<td>Global contention</td>
<td>188</td>
</tr>
<tr>
<td>Group buffer pool</td>
<td>189</td>
</tr>
<tr>
<td>Highlights</td>
<td>191</td>
</tr>
<tr>
<td>Locking</td>
<td>194</td>
</tr>
<tr>
<td>Logging</td>
<td>197</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>198</td>
</tr>
<tr>
<td>Package</td>
<td>198</td>
</tr>
<tr>
<td>Query parallelism</td>
<td>203</td>
</tr>
<tr>
<td>RID list</td>
<td>206</td>
</tr>
<tr>
<td>ROW ID</td>
<td>208</td>
</tr>
<tr>
<td>Stored procedures</td>
<td>208</td>
</tr>
<tr>
<td>SQL DCL</td>
<td>209</td>
</tr>
<tr>
<td>SQL DDL</td>
<td>211</td>
</tr>
<tr>
<td>SQL DML</td>
<td>214</td>
</tr>
<tr>
<td>Thread identification</td>
<td>215</td>
</tr>
</tbody>
</table>
Virtual storage—pool details ................................................................. 298
Virtual storage—shared and common storage ........................................... 299
Virtual storage—statement cache and XPROC detail ................................. 301
Virtual storage—storage statistics ............................................................ 302
Virtual storage—thread information .......................................................... 304
Write register requests ........................................................................ 305

Audit report fields ............................................................................. 306
I/O activity report fields ....................................................................... 307
I/O summary details—active log ................................................................. 308
I/O summary details—archive log ............................................................... 309
I/O summary details—bootstrap dataset .................................................... 310
I/O summary details—buffer pool ............................................................... 310
I/O summary details—cross invalidation activity ...................................... 311
I/O activity summary—active log ............................................................... 312
I/O activity summary—archive log ............................................................. 313
I/O activity summary—buffer pool ............................................................. 314
I/O activity summary—cross invalidation activity ..................................... 316
I/O activity summary—EDM pool .............................................................. 316
I/O activity summary—bootstrap dataset ................................................. 317

Locking activity report fields ................................................................. 318
Lock summary—detail .......................................................................... 318
Lock summary—lockouts ..................................................................... 320
Lock summary—suspensions ................................................................. 321
Lock trace—detail .................................................................................. 322
Lock trace—holder/blocker details ......................................................... 323
Lock trace—suspensions ..................................................................... 324
Lock trace—victim thread identification .................................................. 325
Lock trace—waiter details .................................................................... 326
DB2 timeouts—causing agent ................................................................. 327
DB2 timeouts—victim .......................................................................... 328
DB2 deadlocks—holder ....................................................................... 329
DB2 deadlocks—waiter ....................................................................... 330

SQL activity report fields ................................................................. 331
SQL summary—exits .......................................................................... 332
SQL summary—highlights .................................................................. 332
SQL summary—I/O activity ................................................................. 333
SQL summary—lock suspension activity ............................................ 334
SQL summary—scan activity ................................................................. 335
Thread SQL trace summary—page/row/LOB/XML locking .................. 336

Chapter 7         Performance data tables  339
Accounting summary load—short report (BACCTSRD) .................................487
Accounting summary interval—short report (BACCTSRI) ............................ 488
Accounting summary package—short report (BACCTSRP) ...........................489
Accounting summary exceptions—short report (BACCTSRX) ...................... 489
Accounting detail trace—long report (BACCTLT) ........................................... 490
Accounting detail trace—short report (BACCTST) .......................................... 494
Accounting thread detail—long report (BTHACDTL) ..................................... 495
Thread accounting package summary report (BACCpKSR) ...........................497
Thread summary by interval report (BTHDASUM) ......................................... 499
Thread detail by AUTHID report (BTHDADTL) ........................................... 499
Dynamic SQL Miniplan by period report (THSQLDYN) ................................. 499
Dynamic SQL Miniplan summary report (THSQLDYS) .................................. 500
Statistics reports ............................................................................................. 500
DB2 statistics IFCID tracing detail report (BSTATDI) .......................................501
DB2 statistics detail report (BSTATDR) .......................................................... 501
DB2 statistics trace—long report (BSTATLT) .................................................. 512
Virtual storage status report (BSTATSTD) .................................................... 522
Virtual storage status report (BSTATSTL) ..................................................... 523
Virtual storage status report (BSTATSTM) .................................................... 524
Virtual storage status report (BSTATSTX) ..................................................... 525
Virtual storage status summary report (BSTATSUM) ................................... 527
RID list failures report (BRIDLIST) .............................................................. 527
Audit reports ..................................................................................................... 528
DB2 authorization failures report (BAUDTAUT) ............................................. 528
Audit event history report (BTHAUDIT) ........................................................ 529
DB2 utility events report (BDB2UTIL) ............................................................ 530
I/O activity reports .......................................................................................... 530
I/O summary report by DB2 (BIOSUM) ........................................................... 531
I/O summary detail buffer pool report by DB2 and interval (BIOSUMBP) .......... 533
I/O summary detail EDM Pool report by DB2 and interval (BIOSUMED) ....... 535
I/O summary detail active log report by DB2 and interval (BIOSUMLG) .......... 537
I/O summary detail archive log report by DB2 and interval (BIOSUMAR) ........ 538
I/O summary detail BSDS report by DB2 and interval (BIOSUMBS) ............. 539
I/O summary detail cross invalidation activity report by DB2 and interval ....... 540
Locking activity reports ................................................................................. 542
Lock summary suspensions report (BLKSUMSU) .......................................... 543
Lock summary lockout report (BLKSUMLO) ................................................ 544
Lock summary detail report (BLKSUMDT) .................................................... 545
Lock trace suspensions report (BLKTRCSU) ................................................ 546
Lock trace lockout report (BLKTRCLO) ............................................................. 547
Lock trace event detail report (BLKTRCDT) ..................................................... 549
DB2 timeout report (BTIMEOUT) ................................................................. 551
DB2 deadlock report (BDEADLCK) .............................................................. 551

SQL activity reports .......................................................................................... 553
Summary SQL report by PGM/PKG (BSQSUMP) ........................................... 555
Summary SQL report by PGM/PKG with workloads (BSQSUMPW) .......... 556
Thread SQL trace summary report by PGM/PKG (BSQTRCP) ..................... 557
Thread SQL trace summary report by PGM/PKG with workloads (BSQTRCPW) .............................................................................. 558
Thread SQL trace summary report by PGM/PKG and statement number (BSQTRCS) ................................................................. 559
Thread SQL trace summary report by PGM/PKG and statement number with workloads (BSQTRCSW) ........................................... 560
Thread SQL trace report by occurrence—event timestamp (BSQTRCT) .... 561
Thread SQL trace report by occurrence—event timestamp—workloads (BSQTRCTW) ........................................................................ 562
SQL create thread index report (BSQIX) .......................................................... 563
SQL long trace report (BSQLLT) ......................................................................... 563
SQL compatibility exception trace by event report (BSQTRCCX) ............... 564

Appendix E         Sample audit reports 567

DB2 Audit Summary report (AUSUM) ................................................................. 567
DB2 Authorization Failures report (AUFAIL) .................................................. 569
DB2 Authorization Control—GRANTs/REVOKEs report (AUDGRV) ............. 570
DB2 Audited DDL Access report (AUDDDL) .................................................... 571
DB2 Audited DML Access report (AUDML) ..................................................... 572
DB2 DML at BIND report (AUDMLB) .............................................................. 573
DB2 AUTHID Change report (AUCHNG) ......................................................... 575
DB2 Audit Utility Access report (AUUTIL) ..................................................... 576
DB2 Audit Detail report (AUDTL) ................................................................. 577

MainView for DB2 Performance Reporter User Guide
About this book

This book contains detailed information about the associated product or products. This preface explains the special conventions that the book uses, and how to access related publications.

If applicable, the preface also summarizes the major changes included in the latest release of the product.

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  — Support Central (at http://www.bmc.com/support/mainframe-demonstrations)
  
  — BMC Mainframe YouTube channel (https://www.youtube.com/user/BMCSoftwareMainframe)


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Conventions

This document uses the following special conventions:

- All syntax, operating system terms, and literal examples are presented in this typeface.

- Variable text in path names, system messages, or syntax is displayed in italic text:
  \texttt{testsys/instance/file\textunderscore Name}

- Menu sequences use a symbol to convey the sequence. For example, Actions $\Rightarrow$ Create Test instructs you to choose the Create Test command from the Actions menu.

Syntax statements

This topic explains conventions for showing syntax statements.

A sample statement follows:

\texttt{COMMAND KEYWORD1 [KEYWORD2 | KEYWORD3] KEYWORD4={YES | NO} fileName...}

The following table explains conventions for syntax statements and provides examples:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Example</th>
</tr>
</thead>
</table>
| Items in italic type represent variables that you must replace with a name or value. If a variable is represented by two or more words, initial capitals distinguish the second and subsequent words. | alias  
databaseDirectory  
serverHostName |
<table>
<thead>
<tr>
<th>Convention</th>
<th>Example</th>
</tr>
</thead>
</table>
| Brackets indicate optional items. Do not type the brackets when you enter | [[tableName, columnName, field]  
| the option. A comma means that you can choose one or more of the listed | [-full, -incremental, -level]                                                                                                           |
| options. You must use a comma to separate the options if you choose more |                                                                                                                                       |
| than one option.                                                           |                                                                                                                                       |
| Braces indicate that at least one of the enclosed items is required. Do   | {DBDName | tableName}                                                                                                                    |
| not type the braces when you enter the item.                               | UNLOAD device={disk | tape, fileName | deviceName}                                                                         |
|                                                                           | {-a | -c}                                                                                                                               |
|                                                                           | {commit | cancel}                                                                                                                         |
|                                                                           | columnName...                                                                                                                         |
|                                                                           |                                                                                                                                       |

**Syntax diagrams**

The following figure shows the standard format for syntax diagrams:

![Syntax diagram](image)

The following example illustrates the syntax for a hypothetical DELETE statement. Because the FROM keyword, alias variable, and WHERE clause are optional, they appear below the main command line. In contrast, the **tableName** variable appears on the command line because the table name is required. If the statement includes a
WHERE clause, the clause must contain a search condition or a CURRENT OF clause. (The searchCondition variable appears on the main line for the WHERE clause, indicating that this choice is required.)

The following guidelines provide additional information about syntax diagrams:

- Read diagrams from left to right and from top to bottom.
- A recursive (left-pointing) arrow above a stack indicates that you may choose more than one item in the stack.
- An underlined item is a default option.
- If a diagram shows punctuation marks, parentheses, or similar symbols, you must enter them as part of the syntax.
- In general, IBM commands, keywords, clauses, and data types are displayed in uppercase letters. However, if an item can be shortened, the minimum required portion might be shown in uppercase letters, with the remainder in lowercase (for example, CANcel).
- The following conventions apply to variables in syntax diagrams:
  - Variables are typically displayed in lowercase letters and are always italicized.
  - If a variable is represented by two or more words, initial capitals distinguish the second and subsequent words (for example, databaseName).
Overview of Performance Reporter

This section describes the features of Performance Reporter.

Note
To produce batch reports, you must first customize the MainView for DB2 Performance Reporter component.

To use the Data Collector reports or archive files, you must first install and customize the MainView for DB2 - Data Collector component (MVDB2/DC).

BMC provides MainView customization procedures, described in the Installation System Reference Manual, so that you can tailor your product automatically. The customization steps for Performance Reporter are defined separately from the online feature steps, so that batch reporting can be set up at your convenience. For information about tailoring your product manually, see the section about setting up performance batch reports in the MainView for DB2 Customization Guide.

Introduction to Performance Reporter

Many DB2 performance problems cannot be recognized by obvious real-time symptoms (for example, loops and exceptions).

Often, a detailed analysis is required, using data that is obtained over long periods of time. In cases where a large volume of data needs to be analyzed, a printed report is easier to read than an online report that requires scrolling through many screens. MainView for DB2 addresses this situation by providing the ability to produce printed reports either from DB2 IFCIDs or from data previously loaded into DB2 tables for long-term tracking.

Performance Reporter is an offline analysis system that produces reports and plots that can be used to evaluate DB2 system and application performance. These evaluations can be used for DB2 planning, forecasting, and performance management.
The input data to Performance Reporter are DB2 trace records (IFCIDs). Performance Reporter processes accounting, statistics, and audit records. The data source can be the records written by DB2 to SMF, or records written to MVDB2/DC trace data sets and copied to sequential files in SMF format through an archiving process. For more information about defining trace data sets, specifying which IFCID should be collected, and setting up the archive process, see the MainView for DB2 Customization Guide and the System and SQL Performance for DB2 Administrator Guide.

BMC Software recommends using the Data Collector reports. In special cases, when a report of recent activity is needed, the Data Collector reports can be produced from active trace logs. In this case, the Data Collector address space must be active.

The trace records can also be loaded into DB2 tables where the power of Structured Query Language (SQL) and the IBM Query Management Facility (QMF)™ can be used to fulfill your reporting needs. Queries that are distributed with the product or modified/developed on-site can be used to generate reports. Data summarization and purge routines can be used to control the amount of data while still allowing for both short- and long-term historical reporting. Of special importance is the ability to summarize accounting records before the table load process, reducing both processing overhead and disk storage requirements for the tables.

---

**Note**

Reports on detail performance trace records (SQL and so on) are processed as part of the Application Trace batch trace print facility, from trace logs or in some cases from SMF data. (See the section about printing a trace in MainView for DB2 User Guide.) Also, some system event trace records captured by the Data Collector are available in MVDB2 views. The EXPORT command or the MV Batch utility can be used to produce printed reports from these views.
Figure 1 on page 19 summarizes the processing flow used to produce these reports and charts with Performance Reporter.

Figure 1: Performance Reporter system overview
Performance Reporter input data

Performance Reporter processes DB2 trace records written to SMF or the Data Collector, including the DB2 statistics, accounting, and audit SMF records.

DB2 captures data on its activity as it occurs and writes this information to the SMF data sets or the IFI interface as statistics, accounting, audit, and performance trace records.

For DB2, the number of records produced and the amount of data collected and stored in these records is determined by the DB2 trace options in effect within the DB2 subsystem. For a short description of the DB2 SMF trace options, see “SMF data collection” on page 479. For more information on these options and the resulting differences in DB2 trace records, see the IBM DATABASE 2 Administration Guide.

For the Data Collector, the trace options are defined at installation and can be modified in the online administration panels. In the Data Collector, the records are written to online trace data sets as they are received from DB2. When a data set is full, writing is switched to another data set and the NGL archive utility is automatically submitted to create archive files suitable for batch processing. For instructions about defining a Data Collector and setting these options, see the MainView for DB2 Customization Guide and the System and SQL Performance for DB2 Administrator Guide.

Reports

This section describes the Data Collector reports and reports from DB2 tables.

Data Collector reports

The Data Collector reports can be run either from SMF Data or Data Collector archive logs. The reports can cover one day, several days, or just a short, recent interval. There are reports for accounting, statistics, audit, IO activity, locking activity, and SQL activity. These reports show detail, summary, or trace data.

These reports are covered in more detail in “Data Collector reporting facilities” on page 27.
Reports from DB2 tables

Reporting from the performance data tables within Performance Reporter can be performed with the supplied reporting job DPRREPT, which executes SQL queries.

You can alter the supplied queries (which also run in QMF) or create others for specific reporting requirements, or use any in-house DB2 query tool. Since the voluminous accounting data is usually summarized before loading, reports for longer time periods are easier to produce than from the raw input data.

**Note**
You may want to set up these tables in one DB2 to centralize historical data from many DB2 subsystems. It is not necessary to define these tables in each DB2 being monitored.

The following table lists by default name each of the tables that can be created in Performance Reporter, and the related BBPARM and BBSAMP members.

**Table 1: List of Performance Reporter tables**

<table>
<thead>
<tr>
<th>Default table name and description</th>
<th>Default table space name</th>
<th>Create table space/table member (UBBSAMP)</th>
<th>Report members (BBPARM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRPR.DMRACDTL (accounting table—detail)</td>
<td>DMRPRTAD</td>
<td>DPCSAACDT</td>
<td>ACxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRACSUM (accounting table—summary)</td>
<td>DMRPRTAS</td>
<td>DPCSAACSM</td>
<td>SAxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRACSM2 (accounting table—summary—2)</td>
<td>DMRPRTA2</td>
<td>DPCSACS2</td>
<td>SAxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRAXDTL (Accounting Accelerator table—detail)</td>
<td>DMRPRXAD</td>
<td>DPCTAXDT</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRAXSUM (Accounting Accelerator table—summary)</td>
<td>DMRPRXAS</td>
<td>DPCTAXSM</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRAXSM2 (Accounting Accelerator table—summary—2)</td>
<td>DMRPRxA2</td>
<td>DPCTAXS2</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRAUSUM (audit summary table)</td>
<td>DMRPRAUS</td>
<td>DPCSAUSM</td>
<td>AUSUM AUDTL</td>
</tr>
<tr>
<td>DMRPR.DMRAUGRV (authorization control—GRANTs/REVOKEs table)</td>
<td>DMRPRAUG</td>
<td>DPCSAUGR</td>
<td>AUDGRV</td>
</tr>
<tr>
<td>Default table name and description</td>
<td>Default table space name</td>
<td>Create table space/table member (UBBSAMP)</td>
<td>Report members (BBPARAM)</td>
</tr>
<tr>
<td>-----------------------------------</td>
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<td>--------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>DMRPR.DMRAUUFAL (authorization failures table)</td>
<td>DMRPRAUF</td>
<td>DPCSAUFL DPCTAUFL</td>
<td>AUFAIL</td>
</tr>
<tr>
<td>DMRPR.DMRAUCHG (authorization ID change table)</td>
<td>DMRPRAUC</td>
<td>DPCSAUCH DPCTAUCH</td>
<td>AUUCHNG</td>
</tr>
<tr>
<td>DMRPR.DMRABDTL (buffer accounting table—detail)</td>
<td>DMRPRTID</td>
<td>DPCSABDT DPCTABDT</td>
<td>ACxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRABSUM (buffer accounting table—summary)</td>
<td>DMRPRTIS</td>
<td>DPCSABSM DPCTABSM</td>
<td>SAxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRABSM2 (buffer accounting table—summary–2)</td>
<td>DMRPRTI2</td>
<td>DPCSABSM DPCTABSM</td>
<td>SAxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSBFTDT (buffer statistics table—detail)</td>
<td>DMRPRTBD</td>
<td>DPCSSBDT DPCTSBDT</td>
<td>STxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSBSUM (buffer statistics table—summary)</td>
<td>DMRPRTBS</td>
<td>DPCSSBSM DPCTBSM</td>
<td>SSxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSBSM2 (buffer statistics table—summary–2)</td>
<td>DMRPRTB2</td>
<td>DPCSSBSM DPCTBSM</td>
<td>SSOVDFT SSOVRxx</td>
</tr>
<tr>
<td>DMRPR.DMRADDTL (DDF accounting table—detail)</td>
<td>DMRPRTDD</td>
<td>DPCSADDT DPCTADDT</td>
<td>ACxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRADSUM (DDF accounting table—summary)</td>
<td>DMRPRTDS</td>
<td>DPCSADSM DPCTADSM</td>
<td>SAxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRADSM2 (DDF accounting table—summary–2)</td>
<td>DMRPRTD2</td>
<td>DPCSADSM DPCTADSM</td>
<td>SAxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSTDFT (DDF statistics table—detail)</td>
<td>DMRPRTSF</td>
<td>DPC SSTSD DPCTSTSD</td>
<td>STOVDFT</td>
</tr>
<tr>
<td>DMRPR.DMRSDSUM (DDF statistics table—summary)</td>
<td>DMRPRTFS</td>
<td>DPCSSFSM DPCTFSFM</td>
<td>STOVDFT</td>
</tr>
<tr>
<td>DMRPR.DMRSDSM2 (DDF statistics table—summary–2)</td>
<td>DMRPRTF2</td>
<td>DPCSSFSM DPCTFSFM</td>
<td>SSxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRAUDDL (DDL access table)</td>
<td>DMRPRAUD</td>
<td>DPCSAUDDL DPCTAUDDL</td>
<td>AUDDL</td>
</tr>
<tr>
<td>DMRPR.DMRAUDML (DML access table)</td>
<td>DMRPRAUM</td>
<td>DPCSAUDM DPCTAUDM</td>
<td>AUDML</td>
</tr>
<tr>
<td>DMRPR.DMRAUDBMB (DML at BIND table)</td>
<td>DMRPRAUB</td>
<td>DPCSAUDB DPCTAUDB</td>
<td>AUDBML</td>
</tr>
<tr>
<td>Default table name and description</td>
<td>Default table space name</td>
<td>Create table space/table member (UBBSAMP)</td>
<td>Report members (BBPARM)</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>DMRPR.DMRAPDTL (package accounting table—detail)</td>
<td>DMRPRTPD</td>
<td>DPCSAPDT, DPCTAPDT</td>
<td>ACxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRAPSUM (package accounting table—summary)</td>
<td>DMRPRTPS</td>
<td>DPCSAPSM, DPCTAPSM</td>
<td>SAxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRAPSM2 (package accounting table—summary–2)</td>
<td>DMRPRTP2</td>
<td>DPCSAPSM, DPCTAPSM</td>
<td>SAxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSXDTL (Statistics Accelerator table—detail)</td>
<td>DMRPRXSD</td>
<td>DPCTSXDT</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRSXSUM (Statistics Accelerator table—summary)</td>
<td>DMRPRXSM</td>
<td>DPCTSXSM</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRSXSM2 (Statistics Accelerator table—summary–2)</td>
<td>DMRPRXS2</td>
<td>DPCTXS2</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRSTAT (statistics table—detail)</td>
<td>DMRPRTSS</td>
<td>DPCSSTDT, DPCTSTDT</td>
<td>STxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSTSUM (statistics table—summary)</td>
<td>DMRPRTTS</td>
<td>DPCSSTSM, DPCTSTSM</td>
<td>SSxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSTSM2 (statistics table—summary–2)</td>
<td>DMRPRTT2</td>
<td>DPCSSTSM, DPCTSTSM</td>
<td>SSxxxxxx</td>
</tr>
<tr>
<td>DMRPR.DMRSTADT (storage address space table)</td>
<td>DMRSTADT</td>
<td>DPCTSADT</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRSTSDT (storage system table)</td>
<td>DMRSTSDT</td>
<td>DPCTSSDT</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DMRPR.DMRRAUUTL (utility access table)</td>
<td>DMRPRAUU</td>
<td>DPCSRAUUT, DPCTAUUT</td>
<td>AUUTIL</td>
</tr>
</tbody>
</table>

**Processing options**

This section provides an overview of running data collector reports, extracting data from SMF, running reports from extracted SMF data, loading detail or summary data into DB2 tables, and summarizing or purging table data.
Running Data Collector reports

The Data Collector uses the DOMBRPT1 utility to produce accounting, statistics, and audit reports. This utility is included in the MainView for DB2 - Data Collector libraries. Batch reports can be produced from the following sources:

- Archived and active Data Collector trace data sets
- SMF data sets
- GTF data sets

Extracting data from SMF

The SMF data is processed by the MVDB2 batch job DPRSMF, which extracts DB2 statistics, accounting, and audit records and creates temporary files that are input to the SMF reports or the table load process or both. You can tailor this job stream to set up daily processing.

Running reports from extracted SMF data

The accounting and statistics extract files created in DPRSMF can also be used to create reports without loading the data into DB2 tables.

These reports can be produced either in the DPRSMF job or the extract files can be kept for later processing in the DPRSMFR job.

Loading detail or summary data into DB2 tables

The DPRSMF batch procedure also provides steps that allow you to load the extracted data into the performance data tables in Performance Reporter.

The data can be loaded into detail or summary tables, but it is most often summarized before the load step to reduce DASD and processing overhead. Separate accounting tables exist for the basic accounting data, and optionally for detail buffer pool, package, and DDF location accounting data. Separate statistics tables exist for the basic statistics data, and optionally, for detail buffer pool and DDF location statistics data.
Summarizing or purging table data

The data in DB2 tables can be extracted, reduced, and stored in higher level summary tables by a summarization process.

The amount of data in the statistics and accounting tables can be regulated by a time-controlled purge process. Performance Reporter reports can be created from either the detailed or summary tables.

In Performance Reporter, the DPSUMLD program reads the input table, summarizes the data, and stores the data in the next level summary table; for example, from hourly to daily. Information in the DB2 tables can be summarized for a time period, such as one day. Abstracted data is grouped in plan execution rows, which summarize information for each plan executed. You can specify the time interval to be included in a summary period and which key values are used to determine uniqueness for a summary record. The same process is done for the other tables with additional summary keys provided.

Running reports from DB2 tables

Performance Reporter provides predefined reports using SQL statements that can be run through a batch reporting facility (DPRREPT) or through QMF queries.

DB2 performance charts and plots are available through QMF only. Other queries and reports based on the performance data tables can also be defined.

It is easy to create customized reports for a specific requirement. The SQL select statements used to produce the distributed reports and charts are available, within the QMF or DPRREPT environments, as models in tailoring new reports or charts.

Performance data tables

The performance data tables are the main source of historical information for Performance Reporter.

These tables can be created initially as detailed accounting, statistics, buffer, and audit tables. Each table contains:

- One row for each accounting record (DMRACDTL)
- One row for each package in accounting records with class 7/8 active (optional) (DMRAPDTL)
One row for each buffer pool accessed (optional) (DMRABDTL)
One row for each DDF destination location (optional) (DMRADDTL)
One row for each statistics interval generated by a DB2 system, including buffer pool data summarized into totals for all pools (DMRSTAT)
One row for each statistics interval per single buffer pool (optional) (DMRSBFDT)
One row for each statistics interval per DDF destination location (optional) (DMRSTDF)
One row for each audit record (DMRAUxxx)

Definitions are also provided for two sets of accounting summary tables. For example, DMRACDTL can be summarized into DMRACSUM (perhaps hourly), which could be summarized into DMRACSM2 (perhaps daily). Accounting records, which might occur in high volumes, can be loaded into a DB2 detail table or summarized first and loaded directly into a summary table.

Table release dependencies and migration

The table contents can change from one release of MVDB2 to another, mainly to add columns supporting new DB2 release information.

When migrating to a new release of MVDB2, you must usually define the new tables with unique names. All related jobs and reports must be run only with the tables created by that release of MVDB2.

When you are ready to move a new release into production use, you may want to migrate the data in the previous tables to the new table format. The member DPJMIGR in BBSAMP contains a sample job to migrate tables from the previous release. For more information, see the MainView for DB2 Customization Guide.
Data Collector reporting facilities

This chapter provides information about the accounting, statistics, and audit reports produced from the Data Collector.

For more information, view the Quick Course "Using the DBC and optional features."

Overview

Many DB2 performance problems cannot be recognized by obvious real-time symptoms.

A detailed analysis is often required, using data that has been obtained over long periods of time. Where there is a large volume of data to analyze, a printed report is easier to read than an online report that requires scrolling through many screens. The Data Collector reports address this issue by providing printed reports from a batch job.

Data Collector reporting is accomplished by using the following utilities:

- The Next Generation Logger (NGL) logs and retrieves data based on application-defined keys and a time span. NGL runs as a service within the DB2 Component Services (DBC) subsystem, and relies on the Runtime Component System (RTCS) for registry services. DBC can support one or more instances of NGL. Each instance can support multiple LOGSETs, which are groups of z/OS linear data sets (or logfiles) in which NGL stores data records. Various BMC mainframe products use NGL LOGSETs for their logging requirements.

- The DOMBRPT1 utility produces printed reports from a batch job by using external data sets as input or by using data obtained from the online active data sets. For more information, see “DOMBRPT1 utility” on page 37.

For more information, view the Quick Course "Collecting and reporting audit information."
Selecting the source data for reporting

Data Collector reports can be produced from the following sources:

- Archived and active logfile data sets
- Data Collector EXPORT data sets
- SMF data sets
- GTF data sets

Before you begin reporting, you need to specify the source of data that contains the records that you want to see.

The following table lists the Data Collector reports and the DB2 IFCIDs that are used by each report.

You can use the archived data set directory to find the data sets containing the correct records and intervals for the reports that you want to produce, as described in “Archive directory” on page 33.

### Table 2: IFCIDs used by batch reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Description</th>
<th>IFCIDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACCPKSR</td>
<td>Accounting package summary</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BACCTACM</td>
<td>Accounting Accelerator modeling trace</td>
<td>3</td>
</tr>
<tr>
<td>BACCTDR</td>
<td>Accounting detail</td>
<td>3</td>
</tr>
<tr>
<td>BACCTLT</td>
<td>Accounting long trace</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BACCTSR</td>
<td>Accounting summary</td>
<td>3</td>
</tr>
<tr>
<td>BACCTSRD</td>
<td>Accounting summary load</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BACCTSRI</td>
<td>Accounting summary interval</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BACCTSRP</td>
<td>Accounting summary package</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BACCTSRX</td>
<td>Accounting summary exceptions</td>
<td>3</td>
</tr>
<tr>
<td>BACCTST</td>
<td>Accounting short trace</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BAUDTAUT</td>
<td>DB2 authorization failures</td>
<td>140</td>
</tr>
<tr>
<td>BDB2UTIL</td>
<td>DB2 utility events</td>
<td>23-25</td>
</tr>
<tr>
<td>Report</td>
<td>Description</td>
<td>IFCIDs</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>BDEADLCK</td>
<td>DB2 deadlocks</td>
<td>172</td>
</tr>
<tr>
<td>BIOSUM</td>
<td>I/O summary report by DB2</td>
<td>6-10, 29, 30, 34-41, 114-116, 119, 120, and 255</td>
</tr>
<tr>
<td>BIOSUMAR</td>
<td>I/O summary detail archive log report by DB2 and interval</td>
<td>36, 37, 40, 41, and 114-116</td>
</tr>
<tr>
<td>BIOSUMB BP</td>
<td>I/O summary detail buffer pool report by DB2 and interval</td>
<td>6-10, and 107</td>
</tr>
<tr>
<td>BIOSUMBS</td>
<td>I/O summary detail BSDS report by DB2 and interval</td>
<td>34, 35, 119, and 120</td>
</tr>
<tr>
<td>BIOSUMED</td>
<td>I/O summary detail EDM pool report by DB2 and interval</td>
<td>29 and 30</td>
</tr>
<tr>
<td>BIOSUMLG</td>
<td>I/O summary detail active log report by DB2 and interval</td>
<td>34-39</td>
</tr>
<tr>
<td>BIOSUMXI</td>
<td>I/O summary detail cross invalidation activity report by DB2 and interval</td>
<td>255</td>
</tr>
<tr>
<td>BLKSUMDT</td>
<td>Lock summary detail report</td>
<td>21</td>
</tr>
<tr>
<td>BLKSUMLO</td>
<td>Lock summary lockout report</td>
<td>172, and 196</td>
</tr>
<tr>
<td>BLKSUMSU</td>
<td>Lock summary suspensions report</td>
<td>44, 45, 213-216, 226, and 227</td>
</tr>
<tr>
<td>BLKTRCDT</td>
<td>Lock trace event detail report</td>
<td>20, 21, 44, 45, 172, 196, 213-216, 218, 226, 227, and 337</td>
</tr>
<tr>
<td>BLKTRCLO</td>
<td>Lock trace lockout report</td>
<td>172, and 196</td>
</tr>
<tr>
<td>BLKTRCSU</td>
<td>Lock trace suspensions report</td>
<td>44, 45, 213-216, 226, and 227</td>
</tr>
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<td>BRIDLIST</td>
<td>RID list failures</td>
<td>125</td>
</tr>
<tr>
<td>BSQLIX</td>
<td>SQL create thread index report</td>
<td>73</td>
</tr>
<tr>
<td>BSQLLT</td>
<td>SQL long trace report</td>
<td>6-10, 11, 12, 15-20, 22, 44, 45, 53, 55, 58-66, 68-75, 86-89, 95, 96, and 125</td>
</tr>
<tr>
<td>Report</td>
<td>Description</td>
<td>IFCIDs</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>BSQTRCCX</td>
<td>SQL compatibility exception trace by event report</td>
<td>366</td>
</tr>
<tr>
<td>BSQTRCT</td>
<td>Thread SQL trace report by occurrence (event timestamp)</td>
<td>3, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 97, 108, 109, 174, 175, 177, 183, 237, and 239</td>
</tr>
<tr>
<td>BSQTRCTW</td>
<td>Thread SQL trace report by occurrence (event timestamp) with workloads</td>
<td>3, 6-12, 17-20, 22, 44, 45, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 95-97, 108, 109, 125, 174, 175, 177, 183, 188, 213-216, 218, 221, 226, 227, 237, 239, 247, 250, and 324</td>
</tr>
<tr>
<td>BSTATDI</td>
<td>DB2 statistics IFCID details</td>
<td>1 and 2</td>
</tr>
<tr>
<td>BSTATDR</td>
<td>DB2 statistics detail</td>
<td>1 and 2</td>
</tr>
<tr>
<td>BSTATLT</td>
<td>Statistics long trace</td>
<td>1 and 2</td>
</tr>
<tr>
<td>BSTATSTX</td>
<td>Virtual storage status</td>
<td>255</td>
</tr>
<tr>
<td>BSTATSUM</td>
<td>Virtual storage status summary</td>
<td>255</td>
</tr>
<tr>
<td>BSTATSTD</td>
<td>Virtual storage status</td>
<td>1 and 225</td>
</tr>
<tr>
<td>BSTATSTL</td>
<td>Virtual storage status</td>
<td>1 and 2</td>
</tr>
<tr>
<td>BSTATSTM</td>
<td>Virtual storage status</td>
<td>1, 2, and 225</td>
</tr>
<tr>
<td>BTHACDTL</td>
<td>Thread accounting detail</td>
<td>3 and 239</td>
</tr>
<tr>
<td>BTHAUDIT</td>
<td>Audit event history</td>
<td>140-145</td>
</tr>
<tr>
<td>BTHDADTL</td>
<td>Thread accounting detail</td>
<td>3</td>
</tr>
<tr>
<td>BTHDASUM</td>
<td>Thread summary by interval</td>
<td>3</td>
</tr>
<tr>
<td>BTIMEOUT</td>
<td>DB2 timeouts</td>
<td>196</td>
</tr>
</tbody>
</table>
### Activating optional IFCIDs for batch reporting

IFCIDs 22, 23, 24, 25, 63, 125, 141, 142, 143, 144, and 145 are not started automatically by the Data Collector at initialization.

You must start these IFCIDs in the Data Collector prior to producing a report.

**To activate optional IFCIDs**

1. On the MainView for DB2 easy menu (EZDB2), select MVDB2/DC Admin/Archive.
2. On the DC Main Menu, select Option 1. Administration.
3. On the Administration panel, select Option 2. DOMPLEX Option Sets.
4. On the DOMPLEX Option Sets panel, enter E next to the appropriate DOMPLEX.
5. On the DOMPLEX panel, move the cursor to the + sign next to DB2 Monitor List and press Enter to expand the list.
6. Move the cursor to the + sign next to the appropriate DB2 SSID and press Enter.
7. Move the cursor to the > sign next to DB2 IFCIDs to be traced automatically, and press Enter.
8. Follow the instructions at the top of the panel to add, change, or delete IFCIDs, and press PF3 when done.
9. Move the cursor back to the DB2 SSID, and press Enter to collapse the options for that SSID.
10. Repeat Step 1 on page 31 through Step 9 on page 31 as needed.
11. When all changes have been completed, press PF3 repeatedly until you return to EZDB2.

<table>
<thead>
<tr>
<th>Report</th>
<th>Description</th>
<th>IFCIDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>THSQLDYN</td>
<td>Dynamic SQL/Miniplan by period</td>
<td>22, 63, 105, and 107</td>
</tr>
<tr>
<td>THSQLDYS</td>
<td>Dynamic SQL/Miniplan summary</td>
<td>22, 63, and 107</td>
</tr>
</tbody>
</table>
You have configured the data collector to start the selected IFCIDs automatically every time the data collector is started.

**Where to go from here**

You must also ensure that data classes DB2PERF and DB2AUDIT are being written to a data collector data set. For more information, see “Writing DB2PERF and DB2AUDIT data classes to Data Collector data sets” on page 32.

---

**Writing DB2PERF and DB2AUDIT data classes to Data Collector data sets**

Use this procedure to enable writing of data classes DB2PERF and DB2AUDIT to a data collector data set.

**To write DB2PERF and DB2AUDIT data classes to Data Collector data sets**

1. On EZDB2, select **MVDB2/DC Admin/Archive**.
2. On the DC Main Menu, select **Option 1. Administration**.
3. On the Administration panel, select **Option 2. DOMPLEX Option Sets**.
4. On the DOMPLEX Option Sets panel, enter **E** next to the appropriate DOMPLEX.
5. Move the cursor to the + sign next to **Output Groups** and press **Enter**.
6. Move the cursor to the + sign next to the appropriate output group and press **Enter**.
7. Move the cursor to the + sign next to **Data Classes** and press **Enter**.
8. If necessary, scroll down and change the entries for DB2PERF and DB2AUDIT to **Y** and press **PF3**.
9. Repeat **Step 6 on page 32** through **Step 8 on page 32** as needed.
10. When all changes have been completed, press **PF3** repeatedly until you return to EZDB2.
The Dynamic Trace facility

The Dynamic Trace facility allows you to trace DB2 instrumentation facility component identifiers (IFCIDs) by category or by individual IFCID.

You can start and stop dynamic traces from Current Dynamic Traces view (DYNCT). A series of dialog boxes display options for specifying the IFCIDs that you want to trace, filter qualifiers, and multiple DB2 targets.

With the Dynamic Trace facility you can also:

- Display details about a selected dynamic trace
- Display the filter qualifiers that were specified for a trace
- Display the number of records collected for each IFCID
- Request a RECTRACE report

For more information about the Dynamic Trace facility, see the MainView for DB2 User Guide.

Archive directory

The archive directory provides you with the information that you need to select the data sets containing the records that you need for your reports.

To access the archive directory

1. On EZDB2, select MVDB2/DC Admin/Archive.

2. Select option D from the MainView for DB2 - DC Main Menu (Figure 2 on page 33).

**Figure 2: MainView for DB2 - DC Main Menu**

```
Command ===> 

Select one of the following options. Then press Enter.

_  1. Administration    - Manage User and Data Collector Profiles
_  2. Archive Directory  - View/manage the directory of trace archives
_  3. Explain Interface   - Explain an SQL statement
_  4. Help               - Y. Summary of Changes
_  5. Exit               - Z. About MainView for DB2 - Data Collector
```
The Trace Archive Directory Menu is displayed.

**Figure 3: Trace Archive Directory Menu (DOMECPY0)**

DOMECPY0/I Trace Archive Directory Menu 13:17:54
Command ===> ________________________________________________________________

Select one of the following options. Then press Enter.

- 1. View archived data sets
- 2. View interval record details

The Trace Archive Directory Menu contains the following options:

1. **View archived data sets**—Use this option to display a list of archived data sets (and identify the types of records each contains).

2. **View interval record details**—Use this option to display a list of interval records (and identify the data sets that contain records for those intervals).

**Viewing archived data sets**

The Archived Trace Data Sets panel (displayed below) lists all data sets that have been archived since the System and SQL Performance for DB2 products were installed.

There is a limit of 16,000 entries for the archive directory. If more than 16,000 data sets are archived, the new entries will be added to the archive directory and the oldest entries will be dropped.

**Figure 4: Archived Trace Data Sets panel (DOMECPY1)**

DOMECPY1/P Archived Trace Data Sets LINE 1 OF 2
Command ===> Scroll ===> CSR_

Archive directory data set: DOM.V3R2M01.COPYDIR

Type one or more action codes. Then press Enter.

V - View the list of IFCIDs
R - Remove the archive data record

<table>
<thead>
<tr>
<th>Act</th>
<th>Coll</th>
<th>Created</th>
<th>Data Set Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>_</td>
<td>Z280</td>
<td>2011-03-01 16:09</td>
<td>DOM.Z280.DOMBCOP2</td>
</tr>
<tr>
<td>_</td>
<td>RA01</td>
<td>2011-03-01 15:57</td>
<td>RDHPXK.V3R2.DOMBCOP2</td>
</tr>
</tbody>
</table>
Data sets are sorted by date and time, with the most recently created data set listed first. You can change the sort order by using the SORT command. If more data sets are listed than can be displayed on the panel, you can use the scrolling keys (F7 and F8) to browse the list.

From this panel, you can view a list of all IFCIDs (records) that a data set contains or you can remove an entry from the directory.

**Note**

Only users with administration authority can remove entries from the archive directory. If a user without administration authority attempts to remove an entry, APPTUNE issues an error message.

A Remove Confirmation panel is displayed if you have requested confirmations via the User Session Options panel.

Use the **V** (View) action code to display a list of IFCIDs in the data set. The panel shown in *Figure 5 on page 35* is displayed.

The Archived Trace Data Set IFCID Details panel lists each type of record that is contained in the selected data set.

**Figure 5: Archived Trace Data Set IFCID Details panel (DOMECPY2)**

<table>
<thead>
<tr>
<th>DB2</th>
<th>Src IFC</th>
<th>SSID</th>
<th>Low Timestamp</th>
<th>High Timestamp</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BMC 017</td>
<td>DB2Y</td>
<td>2011-02-17 17:20</td>
<td>2011-02-17 17:27</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>BMC 033</td>
<td>Z280</td>
<td>2011-02-15 14:00</td>
<td>2011-03-01 16:00</td>
<td>318</td>
</tr>
<tr>
<td></td>
<td>BMC 035</td>
<td>DB2Y</td>
<td>2011-02-16 19:00</td>
<td>2011-02-17 19:00</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>BMC 241</td>
<td>Z280</td>
<td>2011-02-15 12:46</td>
<td>2011-03-01 12:45</td>
<td>17518</td>
</tr>
<tr>
<td></td>
<td>BMC 242</td>
<td>DB2A</td>
<td>2011-02-16 18:30</td>
<td>2011-03-01 16:00</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>BMC 242</td>
<td>DB2Y</td>
<td>2011-02-16 19:00</td>
<td>2011-02-17 19:00</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>BMC 245</td>
<td>Z280</td>
<td>2011-02-15 12:46</td>
<td>2011-03-01 16:01</td>
<td>3119</td>
</tr>
<tr>
<td></td>
<td>BMC 245</td>
<td>DB2A</td>
<td>2011-02-17 15:10</td>
<td>2011-03-01 15:10</td>
<td>432</td>
</tr>
<tr>
<td></td>
<td>BMC 245</td>
<td>DB2Y</td>
<td>2011-02-17 16:12</td>
<td>2011-02-17 17:27</td>
<td>59</td>
</tr>
</tbody>
</table>

The following information is included for each IFCID type, sorted by IFCID number:

- IFCID source (BMC or DB2)
- IFCID number
- Subsystem ID of the DB2 associated with the record
- Timestamps of the first and last record of each IFCID type
- Number of records in the data set for each IFCID type
Viewing interval record details

The Interval Record Details panel lists all intervals that are contained in the data sets that have been archived and whose entries still remain on the archive COPYDIR file. Figure 6 on page 35 is displayed.

The Interval Record Details panel is sorted by DB2 subsystem ID in alphabetical order. Within each DB2, the intervals are sorted by time in ascending order. You can select an interval to get a list of the archived data sets that have records in that interval for the listed DB2. Figure 7 on page 36 is displayed.

The Interval Data Sets panel displays the details of the selected interval (high and low timestamps of records, DB2 subsystem ID) and lists all data sets in the archive directory that contain records for that interval.

Use the information on this panel to find the archived data sets that contain the data you want to examine. You can specify an archived data set as the data source for online reporting or as input into the DOMBRPT1 utility for batch reporting.

You can also select the data sets from this panel to see which IFCIDs are represented in the data set (see “Viewing archived data sets” on page 34). Use this information
with the matrix of reports and IFCIDs in “Selecting the source data for reporting” on page 28 to determine which reports to produce.

DOMBRPT1 utility

The DOMBRPT1 utility is the Data Collector utility that produces printed reports from a batch job.

DOMBRPT1 uses external data sets or active data sets as input. An external sort utility named SORT is required. If no program is named SORT in the z/OS LINKLIST, you might need to add a DD statement to your STEPLIB that identifies the load library that contains the sort utility. When processing large amounts of data, your sort utility might need additional SORTWKnn DD statements (consult your sort utility documentation for details).

Member DPRDOMRP in the BBSAMP data set contains sample JCL to run the Data Collector report utility.

Table 3 on page 37 describes the data sets that are processed by DOMBRPT1.

Table 3: DOMBRPT1 data sets

<table>
<thead>
<tr>
<th>DDNAME</th>
<th>Description</th>
<th>DCB Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2LOAD</td>
<td>DB2 load format data will be written to this data set, which can be passed</td>
<td>• RECFM=VB</td>
</tr>
<tr>
<td></td>
<td>to the #DOMLOAD utility in another step to load the data.</td>
<td>• LRECL = 32752</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• BLKSIZE = 32756</td>
</tr>
<tr>
<td>DDNAME</td>
<td>Description</td>
<td>DCB Attributes</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
</tbody>
</table>
| R0001VFG (optional) | Data set used to hold group records for each report if there are too many records to fit in the internal buffers. This value can be adjusted according to the number of selected records, and the degree to which the data is reduced. For example, a report containing accounting information grouped by hour requires fewer group records than a report containing the same information grouped by thread. If not specified, the file is dynamically allocated by using the space allocation that is specified in your User Profile and the unit that is specified in your installation options. Default values are generally sufficient, but can be customized in the Data Collector administration panels. To size the data set:

1. Multiply 32 KB (maximum size of each record) with the number of records to come up with a total size of the input records.
2. Adjust this figure to the track size and approximate sizes of the initial allocation. | Not applicable                  |
| R0001VFL (optional) | Data set used to hold selected records for each report if there are too many records to fit in the internal buffers. This value can be adjusted according to the number of selected records. If not specified, the file is dynamically allocated by using the space allocation that is specified in your User Profile and the unit that is specified in your installation options. Default values are generally sufficient, but can be customized in the Data Collector administration panels. To size the data set:

1. Multiply 32 KB (maximum size of each record) with the number of records to come up with a total size of the input records.
2. Adjust this figure to the track size and approximate sizes of the initial allocation. | Not applicable                  |
<p>| REPORT       | DOMBRPT1 report output and record trace output, if requested                                                                                                                                                 | RECFM = FBA, LRECL = 133, BLKSIZE = any multiple of LRECL |</p>
<table>
<thead>
<tr>
<th>DDNAME</th>
<th>Description</th>
<th>DCB Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SORTWKnn (optional)</td>
<td>Interim data sets for the Sort utility working storage</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>This data set might be required by a sort program if large amounts of trace data are being processed. Refer to your site’s sort program documentation for details about the specification of this DD statement.</td>
<td></td>
</tr>
</tbody>
</table>
| SRCTRACE (optional) | Data set containing a listing of all records found in the TRACEIN file | ■ RECFM = FBA  
■ LRECL = 121  
■ BLKSIZE = any multiple of LRECL |
|               | A single line is generated for each valid record, including an indication of whether the record is used by a report. |                                                                                |
| STEPLIB      | Data Collector load library                                                  | Not applicable                                                                |
| SYSIN        | DOMBRPT1 control statements                                                 | Not applicable                                                                |
| SYSOUT       | SORT messages                                                               | Not applicable                                                                |
| SYSPRINT     | DOMBRPT1 messages and statistics                                            | ■ RECFM = FBA  
■ LRECL = 121  
■ BLKSIZE = any multiple of LRECL |
| TRACEIN      | Trace input data sets                                                       | Not applicable                                                                |
|               | The input data sets can be any of the following data sets: NGL archive output, SMF (compressed or not), GTF, or EXPORT data sets. |                                                                                |
| TRACEWRK     | Interim data set for holding the records that were selected and sorted for reporting | ■ RECFM = VBS  
■ LRECL = 32760  
■ BLKSIZE = 8192 |
|               | The amount of required space increases as the amount of selected data increases. Data is selected if any report requires the record, based on IFCID type, date and time, and qualifiers. |                                                                                |

Report generation requires that input data is sorted by DB2 subsystem ID (QHSSSID) and internal timestamp (QWHSSTCK). These fields are found in the standard header section of DB2 records.

The batch report program expects to read input data from DD TRACEIN, sort it appropriately, and stage it to DD TRACEWRK for subsequent input to each requested report.
When the data source is a data set and you expect to run multiple report jobs against the same data, you can avoid repeating the pre-sort process by making the TRACEWRK DD a permanent file and using it as the TRACEIN DD on subsequent runs. Where the TRACEIN file is pre-sorted, omit the TRACEWRK DD or code it as DD DUMMY.

When the data source is the active Data Collector, the TRACEWRK file is not used (that is, there is no I/O operation to the TRACEWRK file). When the data source is the active Data Collector, you must specify the Data Collector as the data source for each of the reports.

If you try to process data that is not in the proper order, and no TRACEWRK file is specified, message BMC24636 is issued (Normalization processing error, input data not in sequence), and report output is not produced.

**Note**
A Data Collector report execution with TRACEWRK missing or dummied will not produce output on the SRCTRACE DD, because the SRCTRACE output is produced during the processing that is eliminated. If you want SRCTRACE output, produce it on the initial run when the TRACEWRK DD is specified and pointing to an actual data set.

## SYSIN control statements

You can use the following control statements to produce Data Collector reports:

### Table 4: SYSIN control statements

<table>
<thead>
<tr>
<th>Control Statement</th>
<th>Description</th>
<th>Link to control statement and parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATASOURCE</td>
<td>Selects the source of data (data set or Data Collector)</td>
<td>“Control statement parameters” on page 41</td>
</tr>
<tr>
<td>EXPAND</td>
<td>Prints reports in their expanded format</td>
<td>“EXPAND statement and parameter” on page 70</td>
</tr>
<tr>
<td>FILTERDATA</td>
<td>Specifies filtering criteria to refine the scope of a report</td>
<td>“FILTERDATA statement and parameters” on page 71</td>
</tr>
<tr>
<td>IFCID</td>
<td>Specifies IFCIDs to be included in reports</td>
<td>“IFCID statement and parameters” on page 82</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>Specifies a time interval for the data to be included in reports</td>
<td>“INTERVAL statement and parameter” on page 46</td>
</tr>
<tr>
<td>LINESPP</td>
<td>Specifies the number of lines to print on each report page</td>
<td>“LINESPP statement and parameter” on page 84</td>
</tr>
<tr>
<td>Control Statement</td>
<td>Description</td>
<td>Link to control statement and parameters</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>OUTLIM</td>
<td>Specifies the number of report groups to include in reports</td>
<td>“OUTLIM statement and parameter” on page 85</td>
</tr>
<tr>
<td>QUALIFIER</td>
<td>Uses qualifier values to restrict the data that is selected for reports</td>
<td>“QUALIFIER statement and parameter” on page 54</td>
</tr>
<tr>
<td>RECTRACE</td>
<td>Produces a Record Trace report, including all records processed in the reports</td>
<td>“RECTRACE report, statement and parameter” on page 83</td>
</tr>
<tr>
<td>REPORT</td>
<td>Produces Data Collector reports</td>
<td>“REPORT statement” on page 44</td>
</tr>
<tr>
<td>REPORT_DD</td>
<td>Designates a ddname to which report output is directed</td>
<td>“Control statement parameters” on page 41</td>
</tr>
<tr>
<td>SORT</td>
<td>Overrides the default ordering of reports</td>
<td>“SORT and SORT2 parameters” on page 67</td>
</tr>
<tr>
<td>SORT2</td>
<td>Overrides the secondary ordering of reports</td>
<td></td>
</tr>
</tbody>
</table>

**Control statement syntax**

This figure illustrates the DOMBRPT1 syntax.

*Note*

For instructions about reading syntax diagrams, see “Syntax diagrams” on page 15.

**Figure 8: Overview of control statement syntax**

![Syntax Diagram]

*Note*

When a control statement extends beyond one line, the hyphen (-) continuation character must be typed at the end of each line (except the last line) to indicate that the statement continues on the next line.

For an example, see “Examples” on page 46.

**Control statement parameters**

The following table describes parameters for SYSIN control statements.
### Table 5: SYSIN control statement parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATASOURCE (optional)</td>
<td>Selects the source of data for Data Collector reporting. DATASOURCE can be specified only once in a job stream. If DATASOURCE is specified, it must come before any REPORT or QUALIFIER statement. You must also specify either COLLECTOR or ARCHIVE_DD. You cannot specify both. If DATASOURCE is omitted, the TRACEIN data set is used as the source. If there is no TRACEIN DD in the JCL, the Archive Directory is searched for archived trace data sets based on the interval selection that you specified as parameters for the batch reports. The TRACEIN DD is dynamically allocated with the data sets that are retrieved from the Archive directory.</td>
</tr>
</tbody>
</table>
| COLLECTOR | Specifies an active Data Collector as the source of data for Data Collector reporting. With a batch connection to a Data Collector, you can collect instantaneous data, report on data in the active data sets, or both. () (used instead of COLLECTOR statement) Allows the system to select an active Data Collector for you that best meets the following criteria:  
**Note:** Use the parentheses without a value.  
- Is compatible with the product release that you are using  
- Monitors the most DB2s that you are authorized to use  
- Supports all of the System and SQL Performance for DB2 products that are used by your session  
If no active Data Collector is compatible with the products that you are using, a message is issued. |
<p>| DCssid (subsystem ID) | Specifies the subsystem ID of the active Data Collector that you want to use as the source of data. |
| MAX_WAIT(mmmm) | Indicates the amount of time the system should attempt to make a batch connection to the selected Data Collector when no connection is initially available. A valid value for mmmm can be any number between 0 and 1440, indicating the number of minutes to wait. If 0 is specified, the job will be terminated if no batch connection is available. The default is 0. |
| ARCHIVE_DD | Selects a data set to be used as the source of data for batch reporting. () Selects the TRACEIN data set as the source of data for Data Collector reporting. <strong>Note:</strong> Use the parentheses without a value. |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ddname</td>
<td>Identifies the data set to be used as the source of data for Data Collector reporting. Make sure there is a corresponding DD statement in the DOMBRPT1 JCL for the ddname that you specify here.</td>
</tr>
<tr>
<td></td>
<td>You can specify any of the following types of data sets:</td>
</tr>
<tr>
<td></td>
<td>■ SMF data set</td>
</tr>
<tr>
<td></td>
<td>■ GTF data set</td>
</tr>
<tr>
<td></td>
<td>■ Archived trace data set (you cannot specify a trace data set that is in use)</td>
</tr>
<tr>
<td></td>
<td>■ EXPORT data set</td>
</tr>
<tr>
<td>REPORT_DD (ddname)</td>
<td>Designates a default ddname to which report output should be directed. This statement applies to all reports that are produced by subsequent REPORT statements in the same job stream (unless another REPORT_DD statement is specified). Make sure there is a corresponding DD statement in the DOMBRPT1 JCL for the ddname that you specify here. If this parameter is omitted, report output is directed to REPORT DD.</td>
</tr>
<tr>
<td>REPORT</td>
<td>Specifies the reports to be produced. For an explanation of the parameters that can be used with the REPORT statement, see “REPORT statement parameters” on page 44.</td>
</tr>
<tr>
<td>BUFDTL=N</td>
<td>Y (optional)</td>
</tr>
<tr>
<td></td>
<td>■ N (the default) provides summaries for all buffer pools and global buffer pools.</td>
</tr>
<tr>
<td></td>
<td>■ Y provides individual detail for all buffer pools and global buffer pools.</td>
</tr>
<tr>
<td>SCOPE(qual1, qual2, qual3...)</td>
<td>Controls how summary reports are grouped into report sections when the GROUPBY parameter is specified (see “REPORT statement parameters” on page 44). The default SCOPE for these reports is:</td>
</tr>
<tr>
<td></td>
<td>SCOPE(SMFID, DB2ID, DSGRP, DSMEM, LLOC, RLOC)</td>
</tr>
<tr>
<td></td>
<td>This indicates that reports are grouped by system SMF ID, DB2 SSID, DS group, DS member, location, and requester location.</td>
</tr>
<tr>
<td></td>
<td>To turn off grouping by one or more of these qualifiers, specify the SCOPE parameter and omit the unwanted qualifiers. To eliminate all grouping based on these qualifiers, specify the following parameter: SCOPE(NONE)</td>
</tr>
</tbody>
</table>

**Examples**

In the following example that uses DATASOURCE, the statement generates the Batch Accounting Detail report (BACCTDR) from the archive trace data set that is allocated to the DD ARCHDD:

```
DATASOURCE (ARCHIVE_DD(ARCHDD) -)
REPORT(NAME(BACCTDR))
```
In the following example that uses DATASOURCE, the statement generates the same report from the active data sets for the DOM1 Data Collector (waiting no more than 30 minutes for a connection):

**DATASOURCE (COLLECTOR(DOM1)MAX_WAIT(30) -)REPORT(NAME(BACCTDR))**

In the following example that uses REPORT_DD, the statement generates two reports, routing BACCPKSR to the ddname FIRST and BACCTST to the ddname SECOND:

**REPORT_DD(FIRST) - REPORT(NAME(BACCPKSR)) - REPORT_DD(SECOND) - REPORT(NAME(BACCTST))**

**REPORT statement**

Use the REPORT statement to specify one or more reports to be produced.

**REPORT statement syntax**

The following figure shows the syntax of the REPORT statement.

**Figure 9: Syntax of the REPORT statement**

**REPORT statement parameters**

The following table describes parameters for the REPORT statement.
### Table 6: REPORT statement parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME (reportName)</td>
<td>Specifies the report or reports to be produced. Multiple report names must be separated by commas (,).</td>
</tr>
<tr>
<td>REPORT_DD (ddname)</td>
<td>Designates a ddname to which report output should be directed. Only the reports that are specified in this REPORT statement are affected. Make sure there is a corresponding DD statement in the DOMBRPT1 JCL for the ddname that you specify here. If this parameter is omitted, report output is directed to DD REPORT.</td>
</tr>
<tr>
<td>INTERVAL block</td>
<td>Specifies a time interval for the data to be included in the reports that are specified in this REPORT statement. An INTERVAL parameter in the REPORT statement overrides a global INTERVAL statement (For more information, see “INTERVAL statement and parameter” on page 46).</td>
</tr>
<tr>
<td>QUALIFIER block</td>
<td>Implements qualifier values to filter the data to be included in the reports that are produced by this REPORT statement. A QUALIFIER parameter in the REPORT statement overrides a global QUALIFIER statement (For more information, see “QUALIFIER statement and parameter” on page 54).</td>
</tr>
<tr>
<td>GROUPBY (qual-1, qual-2 ...)</td>
<td>Defines primary and secondary grouping criteria for reports. The following qualifiers are supported:</td>
</tr>
<tr>
<td></td>
<td>- AUTHID</td>
</tr>
<tr>
<td></td>
<td>- CONNECTION</td>
</tr>
<tr>
<td></td>
<td>- CONTYP</td>
</tr>
<tr>
<td></td>
<td>- CORRID</td>
</tr>
<tr>
<td></td>
<td>- CORRNAME</td>
</tr>
<tr>
<td></td>
<td>- ENDUNAME</td>
</tr>
<tr>
<td></td>
<td>- ENDTNAME</td>
</tr>
<tr>
<td></td>
<td>- ENDWNAME</td>
</tr>
<tr>
<td></td>
<td>- OPERATOR</td>
</tr>
<tr>
<td></td>
<td>- PACKAGE</td>
</tr>
<tr>
<td></td>
<td>- PLAN</td>
</tr>
<tr>
<td></td>
<td>- ROLE</td>
</tr>
<tr>
<td><strong>Note:</strong> GROUPBY is applicable only to summary reports. The default is GROUPBY(AUTHID,PLAN).</td>
<td></td>
</tr>
<tr>
<td>SORT block (optional)</td>
<td>Overrides the primary sort key by which groups are ordered on the report. For more information, see “SORT and SORT2 parameters” on page 67.</td>
</tr>
<tr>
<td>SORT2 block (optional)</td>
<td>Overrides the secondary sort key by which groups are ordered on the report. For more information, see “SORT and SORT2 parameters” on page 67.</td>
</tr>
<tr>
<td>EXPAND block (optional)</td>
<td>Expands all groups in the report before printing. For more information, see “EXPAND statement and parameter” on page 70.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>RECTRACE block (optional)</td>
<td>Produces a Record Trace report including all data that is selected for the report. For more information, see “RECTRACE report, statement and parameter” on page 83.</td>
</tr>
<tr>
<td>LINESPP block (optional)</td>
<td>Specifies the number of lines to print on each report page. For more information, see “LINESPP statement and parameter” on page 84.</td>
</tr>
<tr>
<td>OUTLIM block (optional)</td>
<td>Specifies the number of report groups that will be included in the report. For more information, see “OUTLIM statement and parameter” on page 85.</td>
</tr>
<tr>
<td>GROUPMETHOD block (optional)</td>
<td>Specifies the sort method used on the report. For more information, see “GROUPMETHOD parameter” on page 86.</td>
</tr>
</tbody>
</table>

**Examples**

In the following example that uses REPORT_DD globally and locally, BACCCKSR and BACCTRD are directed to ddname FIRST, and BACCTLT is directed to ddname SECOND.

```plaintext
REPORT_DD (FIRST) -
REPORT(NAME(BACCCKSR)) -
REPORT(NAME(BACCTLT REPORT_DD(SECOND))) -
REPORT(NAME(BACCTRD))
```

**INTERVAL statement and parameter**

The INTERVAL statement specifies the time interval that applies to the data that is included in reports produced by subsequent REPORT statements in the same job stream.

If a default interval is specified in the report, the INTERVAL statement overrides that default interval.

When used as a parameter of the REPORT statement, the specified interval relates only to the reports that are specified in that REPORT statement. The INTERVAL parameter overrides a default interval and any previously specified INTERVAL statement.

Valid abbreviations for INTERVAL are INT and I.

The date format in the INTERVAL specification is determined by one of the following options:

- Global option called **Site date formatting style option** (acts as the default for all users)
■ User Profile Presentation Options field called **Date formatting style option** (overrides the global default)

■ User Options Presentation Options field called **Date formatting style option** (overrides the User Profile specification)

The valid date formats for the START and END keywords are as follows:

<table>
<thead>
<tr>
<th>Date format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA format</td>
<td>You can specify the date in one of the following formats:</td>
</tr>
<tr>
<td></td>
<td>■ mm/dd/yyyy</td>
</tr>
<tr>
<td></td>
<td>■ mm/dd/yy</td>
</tr>
<tr>
<td></td>
<td>■ mm/dd</td>
</tr>
<tr>
<td>European format</td>
<td>You can specify the date in one of the following formats:</td>
</tr>
<tr>
<td></td>
<td>■ dd/mm/yyyy</td>
</tr>
<tr>
<td></td>
<td>■ dd/mm/yy</td>
</tr>
<tr>
<td></td>
<td>■ dd/mm</td>
</tr>
<tr>
<td>ISO format</td>
<td>You can specify the date in one of the following formats:</td>
</tr>
<tr>
<td></td>
<td>■ yyyy/mm/dd</td>
</tr>
<tr>
<td></td>
<td>■ yy/mm/dd</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You must specify the year if using the ISO format.</td>
</tr>
</tbody>
</table>

Consider the following points when specifying a date and time:

■ You can specify the year in a two-digit or four-digit format.

■ If you specify the year as two digits, Data Collector interprets 00-36 as 2000-2036, and 81-99 as 1981-1999. Values 37-80 are invalid.

■ If you specify a date without yy or yyyy, the year defaults to the current year (USA and European formats only).

■ You can specify the date format by preceding the date with one of the following characters:
  — U (USA format)
  — E (European format)
  — I (ISO format)

■ You can specify time by using one of the following formats:
  — hh:mm:ss (hours, minutes, and seconds)
  — hh:mm (hours and minutes)
**Example**

The following example uses a USA format to request a reporting interval from July 1, 2016 at 10 P.M. to July 31, 2016 at 10 P.M.:

```plaintext
INTERVAL(START(U07/01/16,22:00),END(U07/31/16,22:00))
```

The following example uses a European format to specify the same interval:

```plaintext
INTERVAL(START(E01/07/16,22:00),END(E31/07/16,22:00))
```

---

**Data source**

The data that is used by Data Collector reports can come from either of the following sources:

- Data Collector and its current log file data sets
- External data set

You can specify either a start date and time (START) with an end date and time (END), or a duration (FOR) and a period (BY). The type of data source that you specify determines the default values that are used when components of the interval definition are omitted. To collect and report the DB2 data that you want, it is important that you understand this process.

When a Data Collector is specified as the data source, the batch job makes a connection to the Data Collector, activates the reports that are specified in the REPORT statements, takes a snapshot of the DB2 activity for the reports, and deactivates the reports. The data that is available for reporting consists of all records in the currently active data sets, up to and including the snapshot taken by the batch job. The data that is reported depends on the interval specification.

When an external data set is specified as the data source, only the records in that data set can be reported. The interval specification determines the data that is actually reported.

The following types of external data sets can be used as the source of DB2 data:

- Archived trace data sets
- SMF data sets
- GTF data sets
- EXPORT files

Pay careful attention when specifying start and end times for the batch interval. The records that are included in your report depend on the timestamp:

- If you specify a start time that occurs in the middle of an interval, you will receive data for the *entire* interval. Reporting will begin with the next interval.
If you specify an end time that occurs in the middle of an interval, you will receive *no data* for the entire interval.

If the data that is being reported spans multiple DB2s and those DB2s do not share the same interval, you could have problems choosing start and end times that encompass exactly the data you want to report.

**INTERVAL parameters**

If you have no interval specified, the default interval that is defined in the report is used.

If you specify an interval with no values, the results differ depending on the data source:

- **Data Collector**—Output includes the snapshot of DB2 activity taken while the report was active.
- **Data set**—Output includes all intervals that are present in the data set.

Figure 10 on page 49 shows the syntax of the INTERVAL statement and parameter.

**Figure 10: Syntax of the INTERVAL statement and parameter**

![Syntax Diagram](image)

*Note*

The BSTATDR report is designed to report on delta values between the start and end times of the requested interval. If DB2 is recycled during the interval, the statistics values are reset and the delta calculations are impacted, which can result in low or even negative values in the report. To avoid such values, divide the interval into two separate reports that do not span the time that DB2 was down.

The following tables describe the keywords and the permissible options for each keyword.
START keyword *(optional)*

The START keyword specifies the beginning date and time for the data to be included in reports. This keyword must be specified if FOR or END is specified. The START date and time must be prior to the date and time that the job is run.

If no START keyword is specified, and the data source is a data set, the start time defaults to the timestamp of the first record in the data set.

If no START keyword is specified, and the data source is a Data Collector, the start time defaults to the date and time of report activation.

If there are multiple DB2s being reported that do not all share the same interval, the start time for each DB2 can be different.

---

**Example**

There are two DB2s being reported:
- DB2A has an interval of 24 hours, starting at midnight
- DB2B has an interval of 8 hours (intervals starting at midnight, 8:00 A.M. and 4:00 P.M.)

The report is activated at 10:00 A.M. The interval for DB2A starting at midnight is active, so midnight is the start time for DB2A. The interval for DB2B starting at 8:00 A.M. is active, so 8:00 A.M. is the start time for DB2B.

---

Valid abbreviation: S

**Table 7: START keyword values**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>date</em></td>
<td>Beginning date of the interval&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>-nn</em></td>
<td>Number of days prior to the current date to be used for the beginning date for data in the reports <em>-nn</em>&lt;sup&gt;a&lt;/sup&gt; Valid values include any number from -0 through -60. For example, if -5 is specified on 03/06/2011 (USA format), the start date is 03/01/2011. Use -0 to indicate the current date.</td>
</tr>
</tbody>
</table>

---

<sup>a</sup> DOMBRPT1 utility
### Value Description of value

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
<tbody>
<tr>
<td>time</td>
<td>Beginning time for the data to be included in the reports. Valid values are any time in the range 00:00:00–23:59:59 or 00:00–23:59. When specified without a date, the default differs, depending on the data source:</td>
</tr>
<tr>
<td></td>
<td>- Data Collector—The date defaults to the current date if the specified time has already passed on the current date. If the specified time is later than the current time, the date defaults to the previous day.</td>
</tr>
<tr>
<td></td>
<td>- Data set—The date defaults to the first date upon which that time occurs in the source data set. For example, if a time of 8:00:00 is specified and the timestamp of the first record in the data set is 01/01/2011 10:00:00 (USA format), the date defaults to 01/02/2011.</td>
</tr>
<tr>
<td>date,time</td>
<td>When both a date and time are specified, the reports begin with the first record having a timestamp that is equal to or greater than the specified date and time.</td>
</tr>
<tr>
<td>-nn,time</td>
<td>When both a number of days and a time are specified, the date that is represented by -nn is calculated, and the report begins with the first record having a timestamp that is equal to or greater than the calculated date and specified time.</td>
</tr>
<tr>
<td>a</td>
<td>When specified without a time, the time defaults to midnight (12:00 A.M.) on the specified date (midnight = beginning of day).</td>
</tr>
</tbody>
</table>

---

**END keyword (optional)**

The END keyword specifies the ending date and time for the data to be included in reports.

**Note**

END and FOR are two different ways of specifying the ending time of reports. If both keywords are specified, END is ignored.

If no END or FOR keyword is specified, and the data source is a data set, the end time defaults to the timestamp of the last record in the data set. If no END or FOR keyword is specified, and the data source is a Data Collector, the end time defaults to the time of report deactivation.

The END date and time should be prior to the date and time that the job is run. If both the START and END dates and times are later than the date and time that the job is run, an error results, and no report is produced. If only the END time is later than the data and time that the job is run, the report is produced, but the date-time combination is flagged with a dollar sign ($) in the text of the control statements and the BMC24189 warning message is produced, stating that the end time is later than the run time.
Valid abbreviation: E

Table 8: END keyword values

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
<tbody>
<tr>
<td>date</td>
<td>Ending date of the interval (^{a})</td>
</tr>
<tr>
<td>-nn</td>
<td>Number of days prior to the current date to be used for the ending date for data in the reports</td>
</tr>
<tr>
<td></td>
<td>Valid values are any number in the range -0 through -60. For example, if -5 is specified on 03/06/2011 (USA format), the end date is 03/01/2011. Use -0 to indicate the current date.</td>
</tr>
<tr>
<td>time</td>
<td>Ending time for the data to be included in the reports</td>
</tr>
<tr>
<td></td>
<td>Valid values are any time in the range 00:00:00–23:59:59 or 00:00–23:59.</td>
</tr>
<tr>
<td></td>
<td>When specified without a date, the end date defaults to the start date. For this reason, an end time without a date is valid only if the specified time is later in the day than the start time.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong> If the start date and time are 01/01/2011 8:00:00 (USA format) and you specify an end time without a date, the default date is 01/01/2011 and the specified time must be later than 8:00:00.</td>
</tr>
<tr>
<td>date,time</td>
<td>When both a date and time are specified, the report ends with the last record (in the archived data set when a data set is the source; in the active data set when a Data Collector is the source) having a timestamp equal to or less than the specified date and time.</td>
</tr>
<tr>
<td>-nn,time</td>
<td>When both a number of days and a time are specified, the date represented by -nn is calculated and the report ends with the last record having a timestamp equal to or less than the calculated date and specified time.</td>
</tr>
</tbody>
</table>

\(^{a}\) When specified without a time, the time defaults to midnight (12:00 A.M.) on the specified date (midnight = beginning of day).

**FOR keyword (optional)**

The FOR keyword specifies the duration of the interval (as an alternative to specifying an END time).

---

**Note**

END and FOR are two different ways to specify the ending time of reports. If both keywords are specified, END is ignored.

---

If no END or FOR keyword is specified and the data source is a data set, the end time defaults to the timestamp of the last record in the data set. If no END or FOR keyword is specified and the data source is a Data Collector, the end time defaults to the time of report deactivation.
If neither a START nor an END or FOR is specified and the data source is a data set, the entire contents of the data set are reported. If neither a START nor an END is specified and the data source is a Data Collector, only the current interval at report activation or deactivation is reported.

Valid abbreviation: F

**Table 9: FOR keyword values**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nnn</em></td>
<td>Duration of the interval stated as a number of days</td>
</tr>
<tr>
<td></td>
<td>Valid values are any number in the range 1–364.</td>
</tr>
<tr>
<td><em>time</em></td>
<td>Duration of the interval stated hours, minutes, and seconds (<em>hh:mm:ss</em>).</td>
</tr>
<tr>
<td></td>
<td>Valid values are any time in the range 00:00:00–23:59:59 or 00:00–23:59.</td>
</tr>
<tr>
<td><em>nnn</em>,<em>time</em></td>
<td>Duration of the interval stated as a number of days and hours</td>
</tr>
<tr>
<td></td>
<td>For example, a specification of 30,6:00 means that the interval is reported in periods of 30 days and 6 hours.</td>
</tr>
</tbody>
</table>

**Example:** INTERVAL(START(02/22/2011,6:00:00) - FOR(6:00:00)) This INTERVAL statement sets a global default interval for all reports, which includes data generated on 02/22/2011 (USA format) between 6:00 a.m. and 12:00 noon. Reporting begins with the first record (in the archived data set when data set is the source; in the active data set when a Data Collector is the source) with a timestamp equal to or having an interval that includes the start time and ends with the last record with a timestamp equal to or less than the end date and time. If the data source is a Data Collector and the end time falls within the current interval at report activation, no data from that interval is reported. This INTERVAL statement applies to all subsequent REPORT statements in the same job stream unless they contain an INTERVAL parameter or until another INTERVAL statement is encountered.

**BY keyword (optional)**

The BY keyword specifies the length of the periods into which the interval is to be divided for reporting.

The maximum value for periods is 32767.

If BY is specified without START, “boundaries” are calculated based on the length of the period. The interval is aligned to the closest boundary prior to either report activation (when a Data Collector is the data source) or to the timestamp of the first record (when a data set is the data source).

Valid abbreviation: B
Table 10: BY keyword values

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
<tbody>
<tr>
<td>nnn</td>
<td>Length of each period stated as a number of days</td>
</tr>
<tr>
<td></td>
<td>Valid values are any number in the range 1–364.</td>
</tr>
<tr>
<td>time</td>
<td>Length of each period stated in hours, minutes, and seconds (hh:mm:ss).</td>
</tr>
<tr>
<td></td>
<td>Valid values are any time in the range 00:00:00–23:59:59 or 00:00–23:59.</td>
</tr>
<tr>
<td>nnn,time</td>
<td>Length of each period stated as a number of days and hours</td>
</tr>
<tr>
<td></td>
<td>For example, a specification of 2,12:00 means that the interval is reported in periods of 2.5 days.</td>
</tr>
</tbody>
</table>

Example: INTERVAL(START(02/14/2006,6:00:00) - BY(6:00:00)) This INTERVAL statement sets a global default interval for all reports that include data generated on 02/14/2006 (USA format) between 6:00 A.M. and 12:00 noon. This INTERVAL statement applies to all subsequent REPORT statements in the same job stream unless they contain an INTERVAL parameter, or until another INTERVAL statement is encountered. If BY is not specified, the period defaults to the entire interval duration.

QUALIFIER statement and parameter

The QUALIFIER statement uses qualifier values to filter the data to be included in reports that are produced by subsequent REPORT statements in the same job stream.

If default qualifiers are specified in the report, the QUALIFIER statement overrides those default qualifiers. If the qualifiers are locked in any of the requested reports, a message is printed in the Report Disposition Summary, and the default qualifiers are used for those reports.

When used as a parameter of the REPORT statement, the included or excluded qualifiers relate only to the reports that are specified in that REPORT statement. The QUALIFIER parameter overrides default qualifiers and any previously specified QUALIFIER statement.

Valid abbreviations for QUALIFIER are QUAL and Q. Figure 11 on page 54 shows the syntax of the QUALIFIER statement and parameter.

Figure 11: Syntax of the QUALIFIER statement and parameter

The following tables provide details and permissible values of the keywords for the QUALIFIER statement and parameter.
The INCLUDE and EXCLUDE keywords filter the records that are selected to satisfy report requests. You can specify either INCLUDE or EXCLUDE for each qualifier type, but you cannot specify both of them. INCLUDE is the default selection.

**Table 11: INCLUDE and EXCLUDE**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
</table>
| INCLUDE   | Includes in the reports only records with the qualifier values that are specified in this statement  
Valid abbreviation: I |
| EXCLUDE   | Excludes from the reports records containing the qualifier values that are specified in this statement  
Valid abbreviation: E |

The type values define the type of qualifiers to be included or excluded. At least one qualifier type must be specified. Multiple values must be separated by commas (,). Wildcards are permitted (See “Using Wildcards” on page 66).

**Note**

For a list of appropriate qualifiers for each report, see Table 13 on page 56.

**Table 12: type parameter**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
</table>
| AUTHID    | Authorization ID  
Valid abbreviations: AUTH, A |
| COLLECTION | Collection ID  
Valid abbreviation: COLL |
| CONNECTION | Connection ID  
Valid abbreviations: CONN, N |
| CONTYP    | Connection type (DRDA, CICS, DB2 CALL, DB2 UTILITY, DLI, IMS ATT BMP, IMS ATT MPP, IMS CTL, IMS TRAN BMP, RRSAF ATTACH, RMT PRIV PRO, TSO)  
Valid abbreviation: CONT |
| CORRID    | Correlation ID  
Valid abbreviations: CORR, C |
| DB2       | DB2 SSID  
Valid abbreviation: U |
| ENDUNAME  | End user name  
Valid abbreviation: EUN |
Table 13 on page 56 lists the reports that have been designed specifically for Data Collector reporting and indicates which qualifiers are valid with each report.

**Table 13: Valid qualifiers for Data Collector reporting**

<table>
<thead>
<tr>
<th>Report</th>
<th>Description</th>
<th>Valid Qualifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACCPKSR</td>
<td>Thread accounting package summary</td>
<td>— Authorization ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Collection ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Connection Type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Package Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Plan Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Role</td>
</tr>
<tr>
<td>Report</td>
<td>Description</td>
<td>Valid Qualifiers</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>BACCTDR</td>
<td>Accounting detail trace long</td>
<td>— Authorization ID&lt;br&gt;— Connection Type&lt;br&gt;— DB2&lt;br&gt;— End Transaction&lt;br&gt;— End User Name&lt;br&gt;— End Workstation&lt;br&gt;— Local Location&lt;br&gt;— Package Name&lt;br&gt;— Plan Name&lt;br&gt;— Role</td>
</tr>
<tr>
<td>BACCTLT</td>
<td>Accounting detail trace long</td>
<td>— Authorization ID&lt;br&gt;— Connection ID&lt;br&gt;— Connection Type&lt;br&gt;— Correlation ID&lt;br&gt;— DB2&lt;br&gt;— End Transaction&lt;br&gt;— End User Name&lt;br&gt;— End Workstation&lt;br&gt;— Local Location&lt;br&gt;— Operator ID&lt;br&gt;— Package Name&lt;br&gt;— Plan Name&lt;br&gt;— Remote Location&lt;br&gt;— Role</td>
</tr>
<tr>
<td>BACCTSR</td>
<td>Accounting summary short</td>
<td>— Authorization ID&lt;br&gt;— Connection Type&lt;br&gt;— DB2&lt;br&gt;— End Transaction&lt;br&gt;— End User Name&lt;br&gt;— End Workstation&lt;br&gt;— Local Location&lt;br&gt;— Package Name&lt;br&gt;— Plan Name&lt;br&gt;— Role</td>
</tr>
<tr>
<td>Report</td>
<td>Description</td>
<td>Valid Qualifiers</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| BACCTST    | Accounting detail trace short                 | — Authorization ID  
|            |                                               | — Connection ID  
|            |                                               | — Connection Type  
|            |                                               | — Correlation ID  
|            |                                               | — DB2  
|            |                                               | — End Transaction  
|            |                                               | — End User Name  
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| BAUDTAUT   | DB2 authorization failures                    | — Authorization ID  
|            |                                               | — Correlation ID  
|            |                                               | — DB2  
|            |                                               | — Package Name  
|            |                                               | — Plan Name  |
| BDB2UTIL   | DB2 utility events                            | — DB2  |
| BDEADLCK   | DB2 deadlock report                           | — DB2 SSID  
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|            |                                               | — LLOC  |
| BIOSUMAR   | I/O summary detail archive log report         | — SSID  
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|           |                                    | — Local Location                                |
|           |                                    | — Package Name                                  |
|           |                                    | — Plan Name                                      |
| BTIMEOUT  | DB2 timeout report                 | — DB2 SSID                                      |
|           |                                    | — AUTH                                           |
|           |                                    | — CORRID                                         |
|           |                                    | — CONNECTION                                     |
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|           |                                    | — ENDTNAME                                       |
| THSQLDYN  | Dynamic SQL Miniplan by period     | — Authorization ID  
            |                                    | — Collection ID                         |
|           |                                    | — Connection ID                                 |
|           |                                    | — Correlation ID                                |
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Report | Description | Valid Qualifiers
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THSQLDYS | Dynamic SQL Miniplan summary | — Authorization ID  
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— Connection ID  
— Correlation ID  
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— End Transaction  
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— End Workstation  
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— Operator ID  
— Package Name  
— Plan Name

**Example**

In the following example that uses QUALIFIER, this statement sets a global qualifier specification (for all reports) that includes data that is generated from all TSO connections on behalf of the authorization ID TSR. This QUALIFIER statement applies to all subsequent REPORT statements in the same job stream unless they include a QUALIFIER parameter.

QUALIFIER(CONN(TSO*) AUTH(TSR))

**Using Wildcards**

Only an asterisk (*) and exclamation mark (!) are valid wildcards.

An asterisk, when used alone, matches all values for the identifier. All characters following an asterisk are ignored.

**Note**

If you use a lone asterisk (*) to include all values of an identifier, the effect is the same as making no specification for that identifier. All values of that identifier are included. If you use a lone asterisk to exclude all values of an identifier, no records are reported.

An asterisk, when used at the end of a character string matches all identifiers beginning with that character string.

---

**Example**

Specifying **HNW4PP for an authid finds no matches.**
An asterisk, where components of a qualifier are separated by a period (.), can be used within each component.

**Example**
Specifying DBASE01.*.PSET for Lock Resource matches all values for DBASE01 with a lock type of PSET, regardless of page set.

The exclamation point is used to replace a single character at any position in a string. You cannot use this wildcard in the text hash or data sharing group qualifier.

**Example**
Specifying PLAN!A for Plan Name matches all plans with PLAN in the first four character positions and A in the sixth character position (for example, PLAN1A, PLAN2A, PLAN3A).

**SORT and SORT2 parameters**

The SORT and SORT2 parameters specify primary and secondary sort keys for ordering specific formula fields.

The SORT parameter overrides the primary sort key that is already defined in the report. The SORT2 parameter overrides the secondary sort key that is already defined in the report.

**Figure 12 on page 67** shows the syntax of the SORT parameter.

**Figure 12: Syntax of the SORT parameter**

**Figure 13 on page 67** shows the syntax of the SORT2 parameter.

**Figure 13: Syntax of the SORT2 parameter**
Table 14 on page 68 displays the values for the SORT and SORT2 parameters.

Table 14: SORT and SORT2 parameters

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
<th>Value</th>
<th>Description of value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SORT</td>
<td>Indicates the rearranged sort order for the report</td>
<td>type</td>
<td>Qualifier type to be used as the primary or secondary sort key for ordering the report</td>
</tr>
<tr>
<td>SORT2</td>
<td>The sort keys can be a qualifier type or a specific formula occurring in the report. One of these values is required. If you specify SORT without SORT2, the primary sort key is taken from the SORT specification, and the secondary sort key is taken from the report definition. If you specify SORT2 without SORT, the primary sort key is taken from the report definition and the secondary sort key is taken from the SORT2 specification. Valid abbreviation (SORT): S Valid abbreviation (SORT2): S2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The following qualifier types are valid:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- PLAN (plan name) Valid abbreviation: P</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- OPERATOR (original operator ID) Valid abbreviations: OPER, OPID, O</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- DB2 (DB2 subsystem ID) Valid abbreviation: U</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- AUTHID (authorization ID) Valid Abbreviations: AUTH, A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- CORRELATION (correlation ID) Valid Abbreviations: CORR, C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- LLOCATION (local location) Valid Abbreviations: LLOC, KL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- RLOCATION (requesting location) Valid Abbreviations: RLOC, KR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- COLLECTION (collection ID) Valid abbreviations: COLL, W</td>
</tr>
<tr>
<td>Fnnnn</td>
<td>Specifies the name of the formula, the value of which is to be used as the primary or secondary sort key for ordering the report</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>A</td>
<td>Specifies that the values for the primary or secondary sort key will be reported in ascending order</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>D</td>
<td>Specifies that the values for the primary or secondary sort key will be reported in descending order</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Table 15 on page 69 lists the appropriate fields and the corresponding formulas.
Table 15: Valid formulas

<table>
<thead>
<tr>
<th>Field</th>
<th>Formula (Fnnnn)</th>
<th>BACCTSR</th>
<th>BACCTLT</th>
<th>BACCTDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer update</td>
<td>F4620</td>
<td>M4620</td>
<td>F4620</td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>F3090</td>
<td>M3090</td>
<td>F3090</td>
<td></td>
</tr>
<tr>
<td>CPU (CL1)</td>
<td>F2110</td>
<td>F2140</td>
<td>F2140</td>
<td></td>
</tr>
<tr>
<td>CPU (CL2)</td>
<td>F2210</td>
<td>F74</td>
<td>F2240</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>F3030</td>
<td>M3030</td>
<td>F3030</td>
<td></td>
</tr>
<tr>
<td>Elapsed (CL1)</td>
<td>F2100</td>
<td>F2100</td>
<td>F2100</td>
<td></td>
</tr>
<tr>
<td>Elapsed (CL2)</td>
<td>F2200</td>
<td>F2204</td>
<td>F2202</td>
<td></td>
</tr>
<tr>
<td>Fetch</td>
<td>F3080</td>
<td>M3080</td>
<td>F3080</td>
<td></td>
</tr>
<tr>
<td>Getpage</td>
<td>F4610</td>
<td>F4610</td>
<td>F4610</td>
<td></td>
</tr>
<tr>
<td>Insert</td>
<td>F3010</td>
<td>M3010</td>
<td>F3010</td>
<td></td>
</tr>
<tr>
<td>Lock suspension</td>
<td>F3800</td>
<td>M3800</td>
<td>F3800</td>
<td></td>
</tr>
<tr>
<td>Lockout</td>
<td>F3710</td>
<td>M3710</td>
<td>F3710</td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td>F3070</td>
<td>M3070</td>
<td>F3070</td>
<td></td>
</tr>
<tr>
<td>Dynamic Prefetch</td>
<td>F4670</td>
<td>M4670</td>
<td>F4670</td>
<td></td>
</tr>
<tr>
<td>Prepare</td>
<td>F3060</td>
<td>M3060</td>
<td>F3060</td>
<td></td>
</tr>
<tr>
<td>Select</td>
<td>F3000</td>
<td>M3000</td>
<td>F3000</td>
<td></td>
</tr>
<tr>
<td>Synch read</td>
<td>F4650</td>
<td>M4650</td>
<td>F4650</td>
<td></td>
</tr>
<tr>
<td>Update</td>
<td>F3020</td>
<td>M3020</td>
<td>F3020</td>
<td></td>
</tr>
</tbody>
</table>

Example

In the following example using SORT and SORT2, this statement produces an BACCTSR. The data is sorted by authorization ID (type) in ascending order by default and, within authorization ID, sorted again by application elapsed time (formula) in descending order.

REPORT(NAME(BACCTSR) -
SORT(AUTH) -
SORT2(F2100.D))

In the following example, which uses SORT and SORT2 along with OUTLIM, the statement produces BACCTSR. The report is sorted by DB2 elapsed time in
descending order. Only the ten plans with the highest DB2 elapsed time are reported.

```
REPORT(NAME(BACCTSR) -
  SORT(F2110,D)    -
  OUTLIM(10)
```

**EXPAND statement and parameter**

The EXPAND statement specifies that all groups in the reports will be expanded and printed in their expanded format.

It applies to all reports that are produced by subsequent REPORT statements in the same job stream. The NOEXPAND statement specifies that only the data included on initial display of the report online are included in subsequent printed reports. NOEXPAND is the default.

When used as a parameter of the REPORT statement, EXPAND or NOEXPAND relates only to the reports that are specified in that REPORT statement. An EXPAND or NOEXPAND parameter of a REPORT statement overrides any previously specified EXPAND or NOEXPAND statement.

The only valid abbreviation for EXPAND is EXP, and the only valid abbreviation for NOEXPAND is NOEXP. Figure 14 on page 70 shows the syntax of the EXPAND statement and parameter.

**Figure 14: Syntax of the EXPAND statement and parameter**

```
EXPAND
REPORT(NAME(BACCTST,BSTATLT))
REPORT(NAME(BACCTDR) NOEXPAND)
```
FILTERDATA statement and parameters

The FILTERDATA statement specifies filtering criteria to refine the scope of a report. You can specify the fields that you want to filter, and set item value filters to limit the data provided to reports.

The following table describes the parameters that you can specify in a FILTERDATA statement:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>fieldValue</code></td>
<td>The value that represents the field on which you want to filter data. You can specify values that represent fields for the accounting, statistics, and audit reports, as listed in Table 16 on page 73.</td>
</tr>
<tr>
<td><code>GT</code></td>
<td>Greater than</td>
</tr>
<tr>
<td><code>LT</code></td>
<td>Less than</td>
</tr>
<tr>
<td><code>GE</code></td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td><code>LE</code></td>
<td>Less than or equal to</td>
</tr>
<tr>
<td><code>EQ</code></td>
<td>Equal</td>
</tr>
<tr>
<td><code>NE</code></td>
<td>Not equal</td>
</tr>
<tr>
<td><code>nnnnnnnn</code></td>
<td>Decimal or character qualifier. You can specify the following values:</td>
</tr>
<tr>
<td></td>
<td>■ A maximum value of 99999999 for numeric qualifiers</td>
</tr>
<tr>
<td></td>
<td>■ A maximum of 8 characters</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> For certain audit fields, you can specify up to 18 characters. For more information, see Table 16 on page 73.</td>
</tr>
<tr>
<td><code>hh:mm:ss</code></td>
<td>Time qualifier</td>
</tr>
</tbody>
</table>

Consider the following points when using the FILTERDATA keyword:

- You can abbreviate FILTERDATA to FD.
You can specify a *maximum of four conditions* in a statement.

A statement can include multiple conditions, with or without parentheses; however, each condition must be separated by a comma.

**Example**

```
FILTERDATA( (ACCTCL1ELAP GT 00:00:01), (ACCTCL2ELAP LT 00:00:10), -
(ACCTCL1CPU  GT 00:00:01), (ACCTCL2CPU  LT 00:00:10) )
```

```
FILTERDATA( ACCTCL1ELAP GT 00:00:01, ACCTCL2ELAP LT 00:00:10, -
ACCTCL1CPU  GT 00:00:01, ACCTCL2CPU  LT 00:00:10 )
```

You *cannot* specify the same field value more than once in a statement.

**Example**

This example causes an error message:

```
FD( ( ACCTCL1ELAP GT 00:00:01 ), ( ACCTCL1ELAP LT 00:00:10 ) )
```

Quotation marks are invalid in the FILTERDATA statement. If you enclose values in quotation marks, no data is returned.

To indicate continuation in a statement with multiple lines, type a hyphen (-) and a space at the end of each line that is followed by a continuation line.

**Example**

```
FD( ( ACCTCL1ELAP GT 00:00:01 ), ( ACCTCL2ELAP LT 00:00:10 ), -
( ACCTCL1CPU  GT 00:00:00 ), ( ACCTCL2CPU  LT 00:00:10 ) )
```

BMC does not recommend using the FILTERDATA statement when specifying multiple reports concurrently. If you specify detail and summary reports in the same FILTERDATA statement, incorrect results might be displayed.

For certain fields, qualifiers must be specified in a decimal format:

— You can see the required format for qualifiers in the **Qualifier format** column in Table 16 on page 73.

For the audit reports, some fields in IFCIDs 140, 141, and 145 are accompanied by characters (such as C for collection data). You must convert the hexadecimal value for these characters to a decimal value.

**Table 17 on page 76** shows hexadecimal-to-decimal conversions for the audit fields that require decimal values.

— For some fields, only certain qualifier values are valid.

**Table 18 on page 77** lists the valid values for the Audit Privileges check field (QW0140PR), and the Audit SQL DML statement type field (QW0145ST).
You can view definitions for the QW0140xx, QW0141xx, and QW0145xx fields in the DSNMACS data set for the specified DB2 version, or the DB2 DSNIVPD(DSNWMSGS) data set.

If you are filtering fields on the BTHAUDIT report, you can limit the data included in the report to only one IFCID by using the IFCID parameter.

For example, for the QW0141AC field, assume that you want to retain only IFCID 141 records that equal 199. You can specify one of the following statements:

```
FILTERDATA( AUDITACCTYPE EQ 199 )
REPORT(NAME(BTHAUDIT) EXPAND IFCID(141) )
```

```
FILTERDATA( AUDITACCTYPE EQ 199 )
REPORT(NAME(BTHAUDIT) EXPAND RECTRACE IFCID(141) )
```

The following table lists valid field names for the FILTERDATA statement, the corresponding field values, and the required format for qualifiers if specified with the field value.

**Table 16: FILTERDATA: field values and corresponding field names**

<table>
<thead>
<tr>
<th>Report type</th>
<th>Field name</th>
<th>Corresponding field value</th>
<th>Qualifier format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting reports that use IFCID 3:</td>
<td>QWACC1EL Class 1 elapsed time</td>
<td>AcctCL1Elap</td>
<td>Time</td>
</tr>
<tr>
<td>BACCTACM</td>
<td>QWACC1CP Class 1 CPU time</td>
<td>AcctCL1CPU</td>
<td>Time</td>
</tr>
<tr>
<td>BACCTDR</td>
<td>QWACC2EL Class 2 elapsed time</td>
<td>AcctCL2Elap</td>
<td>Time</td>
</tr>
<tr>
<td>BACCTLT</td>
<td>QWACC2CP Class 2 CPU time</td>
<td>AcctCL2CPU</td>
<td>Time</td>
</tr>
<tr>
<td>BACCTSRI</td>
<td>QWACTHED Calculated number of threads</td>
<td>AcctNumThreads</td>
<td>Decimal</td>
</tr>
<tr>
<td>BACCTSRD</td>
<td>QWACDBAT Calculated number of dbats</td>
<td>AcctNumDbats</td>
<td>Decimal</td>
</tr>
<tr>
<td>BACCTSR</td>
<td>QWACCOMM Calculated number of commits</td>
<td>AcctNumCommits</td>
<td>Decimal</td>
</tr>
<tr>
<td>BACCTSRP</td>
<td>QWACABRT Calculated number of rollbacks</td>
<td>AcctNumRollbks</td>
<td>Decimal</td>
</tr>
</tbody>
</table>

*Note: BACCTST does not support the AcctNumThreads, AcctNumDbats, and AcctNumRollbks field values.*
<table>
<thead>
<tr>
<th>Report type</th>
<th>Field name</th>
<th>Corresponding field value</th>
<th>Qualifier format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics reports that use IFCID 2:</td>
<td>Q3STCTHD</td>
<td>StatNumThreads</td>
<td>Decimal</td>
</tr>
<tr>
<td>■ BSTATDR</td>
<td>Number of threads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>■ BSTATLT</td>
<td>QDSTCNAT</td>
<td>StatNumDbats</td>
<td>Decimal</td>
</tr>
<tr>
<td>■ BSTATST</td>
<td>Number of dbats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3STCOMM</td>
<td>Number of commits</td>
<td>StatNumCommits</td>
<td>Decimal</td>
</tr>
<tr>
<td>QXINCRB</td>
<td>Number of incremental binds</td>
<td>StatIncrBinds</td>
<td>Decimal</td>
</tr>
<tr>
<td>Total SQL DML</td>
<td>StatTotSQLDML</td>
<td></td>
<td>Decimal</td>
</tr>
<tr>
<td>Total SQL DCL</td>
<td>StatTotSQLDCL</td>
<td></td>
<td>Decimal</td>
</tr>
<tr>
<td>Total SQL DDL</td>
<td>StatTotSQLDDL</td>
<td></td>
<td>Decimal</td>
</tr>
</tbody>
</table>
The following table shows hexadecimal-to-decimal conversions for the audit fields that require decimal values.

<table>
<thead>
<tr>
<th>Report type</th>
<th>Field name</th>
<th>Corresponding field value</th>
<th>Qualifier format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit reports:</td>
<td>QW0140PR Audit privileges check</td>
<td>AuditPrivCheck</td>
<td>Decimal&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>■ BAUDTAUT (IFCID 140)</td>
<td>QW0140OB Audit object type</td>
<td>AuditObjType</td>
<td>Decimal&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>■ BTHAUDIT (IFCID 140, 141, and 145)</td>
<td>QW0140SC Audit source object owner</td>
<td>AuditSrcOwn</td>
<td>Character (8)</td>
</tr>
<tr>
<td></td>
<td>QW0140SN Audit source object name</td>
<td>AuditSrcObjn</td>
<td>Character (18)</td>
</tr>
<tr>
<td></td>
<td>QW0140TC Audit target object owner</td>
<td>AuditTgtOwn</td>
<td>Character (8)</td>
</tr>
<tr>
<td></td>
<td>QW0140TN Audit target object name</td>
<td>AuditTgtObjn</td>
<td>Character (18)</td>
</tr>
<tr>
<td></td>
<td>QW0140UR Audit authorization ID checked</td>
<td>AuditAuthidChk</td>
<td>Character (8)</td>
</tr>
<tr>
<td></td>
<td>QW0141AC Audit explicit access type</td>
<td>AuditAccType</td>
<td>Decimal&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>QW0141OB Audit explicit object type</td>
<td>AuditObjType2</td>
<td>Decimal&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>QW0141RE Audit reason access granted</td>
<td>AuditReasGrant</td>
<td>Decimal&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>QW0145ST Audit SQL DML statement type</td>
<td>AuditSQLType</td>
<td>Decimal&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>QW0145IS Audit SQL DML statement isolation level</td>
<td>AuditSQLStmt</td>
<td>Decimal&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> Table 17 on page 76 lists the valid values for this field.
<sup>b</sup> Table 18 on page 77 lists the valid values for this field.
Table 17: FILTERDATA: hexadecimal-to-decimal conversions for QW0140OB

<table>
<thead>
<tr>
<th>Field name</th>
<th>Character</th>
<th>Hex value</th>
<th>Decimal value</th>
</tr>
</thead>
<tbody>
<tr>
<td>QW0140OB/QW0141OB</td>
<td>A (ACEE)</td>
<td>C1</td>
<td>193</td>
</tr>
<tr>
<td></td>
<td>B (bufferpool)</td>
<td>C2</td>
<td>194</td>
</tr>
<tr>
<td></td>
<td>C (collection)</td>
<td>C3</td>
<td>195</td>
</tr>
<tr>
<td></td>
<td>D (database)</td>
<td>C4</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>E (distinct type)</td>
<td>C5</td>
<td>197</td>
</tr>
<tr>
<td></td>
<td>F (function)</td>
<td>C6</td>
<td>198</td>
</tr>
<tr>
<td></td>
<td>H (session variable)</td>
<td>C8</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>J (jar)</td>
<td>D1</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>K (package)</td>
<td>D2</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>L (role)</td>
<td>D3</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td>M (schema)</td>
<td>D4</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>N (trusted context)</td>
<td>D5</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td>O (procedure)</td>
<td>D6</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>P (application plan)</td>
<td>D7</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Q (sequence)</td>
<td>D8</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>R (tablespace)</td>
<td>D9</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>S (storage group)</td>
<td>E2</td>
<td>226</td>
</tr>
<tr>
<td></td>
<td>T (table or view)</td>
<td>E3</td>
<td>227</td>
</tr>
<tr>
<td></td>
<td>U (user authorization)</td>
<td>E4</td>
<td>228</td>
</tr>
<tr>
<td></td>
<td>W (row)</td>
<td>E6</td>
<td>230</td>
</tr>
<tr>
<td>QW0141AC</td>
<td>G (grant)</td>
<td>C7</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>R (revoke)</td>
<td>D9</td>
<td>217</td>
</tr>
</tbody>
</table>
### Table 18: FILTERDATA: valid qualifiers for QW0140PR and QW0145ST

<table>
<thead>
<tr>
<th>Field name</th>
<th>Qualifier value</th>
<th>Type of privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>QW0140PR</td>
<td>09</td>
<td>Display profile</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Start profile</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Stop profile</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Start RLIMIT</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Stop RLIMIT</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Display RLIMIT</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Create alias</td>
</tr>
<tr>
<td>QW0145IS</td>
<td>L</td>
<td>RS isolation-level X-lock</td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>RR isolation level</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>CS isolation level</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>RS isolation level</td>
</tr>
<tr>
<td></td>
<td>U</td>
<td>UR isolation level</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>RR isolation-level X-lock</td>
</tr>
</tbody>
</table>

The following table describes the qualifier values that you can specify for the Audit Privileges check field (QW0140PR), and the Audit SQL DML statement type field (QW0145ST).
<table>
<thead>
<tr>
<th>Field name</th>
<th>Qualifier value</th>
<th>Type of privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>QW0140PR (continued)</td>
<td>16</td>
<td>Monitor 1</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Monitor 2</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Check utility</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Drop alias</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>DDF command—start, stop, or cancel</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>Select</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>Insert</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>Delete</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>References</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>Trigger</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>Create index</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>DBADDM</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>Terminate utility on database</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>All on packages</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>Alter</td>
</tr>
<tr>
<td></td>
<td>62</td>
<td>Display thread or display database</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>Execute</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>Bind, rebind, or free</td>
</tr>
<tr>
<td></td>
<td>66</td>
<td>Create DBA</td>
</tr>
<tr>
<td></td>
<td>67</td>
<td>Create STOGROUP</td>
</tr>
<tr>
<td></td>
<td>68</td>
<td>DBCTRL</td>
</tr>
<tr>
<td></td>
<td>69</td>
<td>DBMAINT</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>Recover INDOUBT</td>
</tr>
<tr>
<td></td>
<td>73</td>
<td>Drop</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>Copy</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>Load</td>
</tr>
<tr>
<td></td>
<td>76</td>
<td>Explicit qualifier use</td>
</tr>
<tr>
<td></td>
<td>77</td>
<td>Reorg</td>
</tr>
<tr>
<td></td>
<td>78</td>
<td>Repair</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>Start database</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>Start DB2, stop DB2, start DB(<em>), or stop DB(</em>)</td>
</tr>
<tr>
<td>Field name</td>
<td>Qualifier value</td>
<td>Type of privilege</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>QW0140PR (continued)</td>
<td>82</td>
<td>RUNSTATS utility</td>
</tr>
<tr>
<td></td>
<td>83</td>
<td>Stop database</td>
</tr>
<tr>
<td></td>
<td>84</td>
<td>Stop or start trace</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>SYSADM</td>
</tr>
<tr>
<td></td>
<td>86</td>
<td>SYSOPR</td>
</tr>
<tr>
<td></td>
<td>87</td>
<td>Use</td>
</tr>
<tr>
<td></td>
<td>88</td>
<td>Bind ADD</td>
</tr>
<tr>
<td></td>
<td>89</td>
<td>Recover (utility)</td>
</tr>
<tr>
<td></td>
<td>92</td>
<td>Create DBC</td>
</tr>
<tr>
<td></td>
<td>93</td>
<td>Recover BSDS</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>Create table</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>Create tablespace</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>Display utility</td>
</tr>
<tr>
<td></td>
<td>97</td>
<td>Comment on</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>Lock table</td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>Display database</td>
</tr>
<tr>
<td></td>
<td>102</td>
<td>Create synonym</td>
</tr>
<tr>
<td></td>
<td>103</td>
<td>Alter index</td>
</tr>
<tr>
<td></td>
<td>104</td>
<td>Drop synonym</td>
</tr>
<tr>
<td></td>
<td>105</td>
<td>Drop index</td>
</tr>
<tr>
<td></td>
<td>107</td>
<td>STOSPACE utility</td>
</tr>
<tr>
<td></td>
<td>108</td>
<td>Create view</td>
</tr>
<tr>
<td></td>
<td>109</td>
<td>Term utility</td>
</tr>
<tr>
<td></td>
<td>112</td>
<td>Display bufferpool</td>
</tr>
<tr>
<td></td>
<td>113</td>
<td>Alter bufferpool</td>
</tr>
<tr>
<td></td>
<td>224</td>
<td>SYSCTRL</td>
</tr>
<tr>
<td></td>
<td>225</td>
<td>Copy package</td>
</tr>
<tr>
<td></td>
<td>226</td>
<td>Create IN</td>
</tr>
<tr>
<td></td>
<td>227</td>
<td>Bind agent</td>
</tr>
<tr>
<td></td>
<td>228</td>
<td>ALLPKAUT</td>
</tr>
<tr>
<td>Field name</td>
<td>Qualifier value</td>
<td>Type of privilege</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>QW0140PR (continued)</td>
<td>229</td>
<td>SUBPKAUT</td>
</tr>
<tr>
<td></td>
<td>231</td>
<td>Archive</td>
</tr>
<tr>
<td></td>
<td>233</td>
<td>Describe table</td>
</tr>
<tr>
<td></td>
<td>236</td>
<td>Diagnose utility</td>
</tr>
<tr>
<td></td>
<td>237</td>
<td>MERGECOPY utility</td>
</tr>
<tr>
<td></td>
<td>238</td>
<td>Modify utility</td>
</tr>
<tr>
<td></td>
<td>239</td>
<td>Quiesce utility</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>Report utility</td>
</tr>
<tr>
<td></td>
<td>241</td>
<td>Repair DBD utility</td>
</tr>
<tr>
<td></td>
<td>242</td>
<td>PACKADM</td>
</tr>
<tr>
<td></td>
<td>243</td>
<td>Set archive</td>
</tr>
<tr>
<td></td>
<td>244</td>
<td>Display archive</td>
</tr>
<tr>
<td></td>
<td>248</td>
<td>Create global temporary table (CREATETMTAB)</td>
</tr>
<tr>
<td></td>
<td>251</td>
<td>Rename table</td>
</tr>
<tr>
<td></td>
<td>252</td>
<td>ALTERIN</td>
</tr>
<tr>
<td></td>
<td>261</td>
<td>CREATEIN</td>
</tr>
<tr>
<td></td>
<td>262</td>
<td>DROPIN</td>
</tr>
<tr>
<td></td>
<td>263</td>
<td>Usage</td>
</tr>
<tr>
<td></td>
<td>265</td>
<td>Start</td>
</tr>
<tr>
<td></td>
<td>266</td>
<td>Stop</td>
</tr>
<tr>
<td></td>
<td>267</td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>274</td>
<td>Comment on index</td>
</tr>
<tr>
<td></td>
<td>280</td>
<td>VALIDATE SECLABEL</td>
</tr>
<tr>
<td></td>
<td>281</td>
<td>MLS READWRITE</td>
</tr>
<tr>
<td></td>
<td>282</td>
<td>Debug session</td>
</tr>
<tr>
<td></td>
<td>283</td>
<td>Rename index</td>
</tr>
<tr>
<td></td>
<td>284</td>
<td>SECADM</td>
</tr>
<tr>
<td></td>
<td>285</td>
<td>Create secure object</td>
</tr>
<tr>
<td></td>
<td>286</td>
<td>Explain</td>
</tr>
<tr>
<td></td>
<td>287</td>
<td>SYSTEM DBADM</td>
</tr>
<tr>
<td></td>
<td>289</td>
<td>ACCESSCTRL</td>
</tr>
<tr>
<td></td>
<td>290</td>
<td>SQLADM</td>
</tr>
<tr>
<td>Field name</td>
<td>Qualifier value</td>
<td>Type of privilege</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>QW0140PR (continued)</td>
<td>291</td>
<td>Read</td>
</tr>
<tr>
<td></td>
<td>292</td>
<td>Write</td>
</tr>
<tr>
<td></td>
<td>293</td>
<td>Explain monitor</td>
</tr>
<tr>
<td></td>
<td>294</td>
<td>Query tuning</td>
</tr>
<tr>
<td></td>
<td>295</td>
<td>Check data utility</td>
</tr>
<tr>
<td></td>
<td>296</td>
<td>SYSOPR SYSCTRL SYSADM SECADM</td>
</tr>
<tr>
<td></td>
<td>501</td>
<td>Access control drop table exemption</td>
</tr>
<tr>
<td></td>
<td>502</td>
<td>Access control truncate exemption</td>
</tr>
<tr>
<td></td>
<td>503</td>
<td>Access control utility exemption</td>
</tr>
<tr>
<td>QW0145ST</td>
<td>3</td>
<td>Open</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Fetch</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Close</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Prepare</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Execute</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Execute immediate</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Describe</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>Explain</td>
</tr>
<tr>
<td></td>
<td>229</td>
<td>Truncate</td>
</tr>
<tr>
<td></td>
<td>231</td>
<td>Select-query</td>
</tr>
<tr>
<td></td>
<td>232</td>
<td>Insert</td>
</tr>
<tr>
<td></td>
<td>233</td>
<td>Delete</td>
</tr>
<tr>
<td></td>
<td>234</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>278</td>
<td>Lock</td>
</tr>
<tr>
<td></td>
<td>308</td>
<td>Create view</td>
</tr>
<tr>
<td></td>
<td>746</td>
<td>Set host variable</td>
</tr>
<tr>
<td></td>
<td>835</td>
<td>Set assignment</td>
</tr>
<tr>
<td></td>
<td>837</td>
<td>Values clause</td>
</tr>
<tr>
<td></td>
<td>867</td>
<td>Refresh</td>
</tr>
<tr>
<td></td>
<td>893</td>
<td>Merge</td>
</tr>
</tbody>
</table>
Examples

This topic provides various examples of how to use FILTERDATA statements to filter report results.

Example

This example filters all IFCID 3 threads with Class 1 elapsed time greater than 1 second for the BACCTSR accounting report:

```
FILTERDATA(AcctCL1Elap GT 00:00:01)
REPORT(BACCTSR)
```

Example

This example filters only commits greater than 256 for the BSTATLT statistics report:

```
FD(StatNumCommits GT 256)
REPORT(BSTATLT)
```

Example

This example filters only WRITE privileges checked for Object Types of Database for the BAUDTAUT report. The qualifiers values are as follows:

- QW0140PR — W (write) = 292
- QW0140OB — D (database), hex value=C4, decimal value=196

```
FILTERDATA((AudPrivCheck EQ 292), (AudObjType EQ 196))
REPORT(BAUDTAUT)
```

Example

This example filters IFCID 140 (QW0140PR) and IFCID 145 (QW0145ST) if they are present in the input data that is used for the report. The Expand keyword shows hidden groups, if present.

```
FILTERDATA((AuditPrivCheck EQ 226), (AuditSQLType EQ 231))
REPORT(NAME(BTHAUDIT) EXPAND)
```

IFCID statement and parameters

The IFCID statement specifies IFCIDs, or a range of IFCIDs, to be included in reports.
You can select specific IFCIDs by separating each IFCID with a comma. Alternatively, you can specify a range of IFCIDs by using a colon.

**Figure 15: Syntax of the IFCID statement**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>nnn</td>
<td>required</td>
</tr>
</tbody>
</table>

Specifies the IFCIDs that are included in the report.

**Example**

The following syntax specifies IFCIDs 143, 144, and 145.

```
IFCID(143,144,145)
```

The following syntax specifies IFCIDs 143 through 145.

```
IFCID(143:145)
```

**RECTRACE report, statement and parameter**

The RECTRACE statement specifies a detailed report that includes every field in every record that is selected for each report.

It applies to all reports that are produced by subsequent REPORT statements in the same job stream. The record trace for each report is printed immediately following the report itself. It is comparable to the record trace that is produced online by using the Report Status panels. The NORECTRACE statement specifies that no record trace reports are produced. NORECTRACE is the default.

When used as a parameter of the REPORT statement, RECTRACE applies only to the reports specified in that REPORT statement. A RECTRACE or NORECTRACE parameter of a REPORT statement overrides any previously specified RECTRACE or NORECTRACE statement.
The only valid abbreviation for RECTRACE is RT, and the only valid abbreviation for NORECTRACE is NORT. Figure 16 on page 84 shows the syntax of the RECTRACE statement and parameter.

Figure 16: Syntax of the RECTRACE statement and parameter

In addition, you can specify RECTRACE as the report name when processing TRACEIN input that was collected via GTF or SMF tracing. When using this capability, you can also specify IFCIDS as a parameter on the REPORT statement to limit the records being formatted.

Examples

The following example uses the RECTRACE parameter. This REPORT statement produces an Accounting Short Trace (BACCTST) report followed by a detailed record trace of every record that is included in the report.

```
REPORT(NAME(BACCTST) RECTRACE)
```

The following example uses the RECTRACE report and parameter. This REPORT statement produces a detailed report of every field for every IFCID 3 and 239 record in TRACEIN.

```
REPORT(NAME(RECTRACE) RECTRACE IFCID(3,239))
```

The following example prints formatted SQL IFCIDs from TRACEIN:

```
REPORT(NAME(RECTRACE) RECTRACE IFCID(53, 55, 58, 59, 60, 61, 62))
```

LINESPP statement and parameter

The LINESPP statement specifies the maximum number of lines that are printed per page for all reports that are produced by subsequent REPORT statements in the same job stream.

Fewer than the specified maximum lines might be printed to prevent splitting a group across pages.

When used as a parameter of the REPORT statement, LINESPP applies only to the reports that are specified in that REPORT statement.
If this statement/parameter is omitted, reports are printed at 60 lines per page. The only valid abbreviations for LINESPP are LINES and L. Figure 17 on page 85 shows the syntax of the LINESPP statement/parameter.

**Figure 17: Syntax of the LINESPP statement and parameter**

![Syntax of the LINESPP statement and parameter](image)

Table 19 on page 85 describes the keyword for the LINESPP statement and parameter.

**Table 19: LINESPP statement and parameter keyword**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>nn</td>
<td>Specifies the number of lines to print per page</td>
</tr>
<tr>
<td></td>
<td>Valid values are any number in the range 0, 10-99.</td>
</tr>
<tr>
<td></td>
<td>Specifying 0 causes no page headings to be generated.</td>
</tr>
</tbody>
</table>

**Example**

In the following example that uses the LINESPP parameter, this REPORT statement produces a Accounting Short Trace (BACCTST) report that has 55 lines on each printed page.

```
REPORT(NAME(BACCTST) LINESPP(55))
```

**OUTLIM statement and parameter**

The OUTLIM statement specifies the number of reporting groups that are included in all reports that are produced by subsequent REPORT statements in the same job stream.

When used as a parameter of the REPORT statement, OUTLIM applies only to the reports that are specified in that REPORT statement.
If this statement or parameter is omitted, all groups in the data are reported. The only valid abbreviation for OUTLIM is OL. Figure 18 on page 86 shows the syntax of the OUTLIM statement and parameter.

**Figure 18: Syntax of the OUTLIM statement and parameter**

```
OUTLIM(nnnn)
```

Table 20 on page 86 describes the keyword for the OUTLIM statement and parameter.

**Table 20: OUTLIM statement and parameter keyword**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>nnnn</td>
<td>Specifies the number of groups that are included in the report. Valid values are any number in the range 1-9999.</td>
</tr>
</tbody>
</table>

**GROUPMETHOD parameter**

The GROUPMETHOD parameter specifies the sort method used by the report.

The following sort methods are available:

- The SORT keyword specifies that the report should process the output using the traditional sort.
- The MEMORY keyword specifies that the report should bypass the traditional sort and build the output in memory buffers.

The MEMORY keyword is more efficient when there are a large number of input records and a small number of output records.

Figure 19 on page 86 shows the syntax of the GROUPMETHOD parameter.

**Figure 19: Syntax of the GROUPMETHOD parameter**

```
GROUPMETHOD { SORT | MEMORY -size- }
```
The GROUPMETHOD parameter is valid only for the following reports:

- BACCPKSR - Accounting Package Summary
- BACCTDR - Accounting Detail
- BACCTSR - Accounting Summary

Table 21 on page 87 displays the values for the GROUPMETHOD parameter.

### Table 21: GROUPMETHOD parameter keywords

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUPMETHOD</td>
<td>Specifies the method the report uses to sort the output</td>
</tr>
<tr>
<td></td>
<td>Valid abbreviation: GM</td>
</tr>
<tr>
<td>SORT (optional)</td>
<td>Runs the sort as it traditionally ran</td>
</tr>
<tr>
<td></td>
<td>SORT is the default.</td>
</tr>
<tr>
<td></td>
<td>Valid abbreviation: S</td>
</tr>
<tr>
<td>MEMORY (optional)</td>
<td>Specifies that output records are to be built in memory buffers and the</td>
</tr>
<tr>
<td></td>
<td>traditional sort bypassed</td>
</tr>
<tr>
<td></td>
<td>The default is 64 megabytes of ATB memory when the size keyword is not</td>
</tr>
<tr>
<td></td>
<td>specified.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If you are using the MEMORY keyword, comment out the TRACEWRK</td>
</tr>
<tr>
<td></td>
<td>DD statement in the JCL.</td>
</tr>
<tr>
<td></td>
<td>Valid abbreviations: MEM, M</td>
</tr>
<tr>
<td>size (optional)</td>
<td>Specifies the amount of ATB (64-bit) memory available to build the memory</td>
</tr>
<tr>
<td></td>
<td>buffers</td>
</tr>
<tr>
<td></td>
<td>Valid values include any number from 0-9999. Using 0 specifies 64 megabytes</td>
</tr>
<tr>
<td></td>
<td>of ATB memory. Using 1-9999 specifies the amount (in megabytes) of ATB</td>
</tr>
<tr>
<td></td>
<td>memory.</td>
</tr>
</tbody>
</table>

### Examples

The following example runs the BACCTDR report in the same manner as in the past:

```plaintext
REPORT (NAME (BACCTDR) GROUPMETHOD (SORT))
```

The following example runs the BACCTDR report without sorting the normalized records and builds group records in 64-bit storage, using a maximum of 64 MB of ATB (64-bit) memory:

```plaintext
REPORT (NAME (BACCTDR) GROUPMETHOD (MEM))
```
The following example runs the BACCTDR report without sorting the normalized records and builds group records in 64-bit storage, using a maximum of 1024 MB of ATB memory:

```
REPORT(NAME(BACCTDR) GM(M(1024)))
```

## Data Collector report output

The output from the DOMBRPT1 utility is printed in the following order:

- **Source record trace** (only if SRCTRACE DD is specified in the JCL)
- **SYSPRINT** (includes information about the input data set and summary data for each report that is produced)
- **Reports** (in the order that is specified in the REPORT statements)
  - Record trace (following each report for which a record trace was specified)
- **SYSOUT** (can be used to diagnose sort problems)

### Source record trace

The Source Record Trace is produced by including the SRCTRACE DD statement in the DOMBRPT1 JCL.

A report is printed that includes a one-line entry for each record in the input data set. Figure 20 on page 88 shows a sample of the source record trace output.

### Figure 20: Example of source record trace

```
| UNWANTED | DB2 261 | 04/10/06 23:36:02.975456 | DGK1 |
| UNWANTED | DB2 261 | 04/10/06 23:36:18.339194 | DBQ1 |
| UNWANTED | DB2 1   | 04/10/06 23:37:28.422400 | WSI1 |
| UNWANTED | DB2 2   | 04/10/06 23:37:28.422501 | WSI1 |
| UNWANTED | DB2 1   | 04/10/06 23:41:04.045561 | MCM4 |
| UNWANTED | DB2 2   | 04/10/06 23:41:04.045664 | MCM4 |
| UNWANTED | DB2 1   | 04/10/06 23:41:58.173403 | DGK1 |
| UNWANTED | DB2 2   | 04/10/06 23:41:58.180724 | DGK1 |
| UNWANTED | DB2 106 | 04/10/06 23:41:58.180776 | DGK1 |
| UNWANTED | DB2 202 | 04/10/06 23:41:58.180898 | DGK1 |
| UNWANTED | DB2 254 | 04/10/06 23:41:58.181019 | DGK1 |
| UNWANTED | DB2 230 | 04/10/06 23:41:58.181114 | DGK1 |
| UNWANTED | DB2 105 | 04/10/06 23:41:58.181189 | DGK1 |
| UNWANTED | DB2 225 | 04/10/06 23:41:58.181304 | DGK1 |
| UNWANTED | DB2 1   | 04/10/06 23:42:58.978423 | DFE1 |
| UNWANTED | DB2 2   | 04/10/06 23:42:58.978878 | DFE1 |
| UNWANTED | DB2 106 | 04/10/06 23:42:58.978940 | DFE1 |
| UNWANTED | DB2 202 | 04/10/06 23:42:58.979161 | DFE1 |
| UNWANTED | DB2 105 | 04/10/06 23:42:58.979335 | DFE1 |
| UNWANTED | DB2 225 | 04/10/06 23:42:58.979643 | DFE1 |
| UNWANTED | DB2 261 | 04/10/06 23:44:03.052411 | DGK1 |
| UNWANTED | DB2 261 | 04/10/06 23:44:18.419608 | DBQ1 |
```
Table 22 on page 89 describes the values for the Source Record Trace.

**Table 22: Source record trace description**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERRORS</td>
<td>Indicates whether or not the record satisfies the requirements to be included in one of the requested reports. Possible values are as follows:</td>
</tr>
<tr>
<td></td>
<td>■ <em>OK</em>—This record satisfies the requirements to be included in a report.</td>
</tr>
<tr>
<td></td>
<td>■ UNWANTED—This IFCID is not used by any requested report.</td>
</tr>
<tr>
<td></td>
<td>■ INTERVAL—The timestamp of this record falls outside the intervals that are specified for any requested report.</td>
</tr>
<tr>
<td></td>
<td>■ BAD DATA—This record contains invalid data or format errors.</td>
</tr>
<tr>
<td></td>
<td>■ BAD QUAL—The qualifiers in the record do not match the filters that are specified for any report.</td>
</tr>
<tr>
<td></td>
<td>■ BAD ITEM—An item in the record does not match the item value filters that are specified in the report definition for that item.</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>Record sequence number in the TRACEIN file</td>
</tr>
<tr>
<td>IFCID</td>
<td>IFCID number of the record, preceded by DB2 or BMC to identify the source of the data</td>
</tr>
<tr>
<td>DATE</td>
<td>Date that the record was generated</td>
</tr>
<tr>
<td>TIME</td>
<td>Time that the record was generated</td>
</tr>
<tr>
<td>SSID</td>
<td>Subsystem ID of the DB2 subsystem or the Data Collector that generated the record</td>
</tr>
<tr>
<td>CONN-ID</td>
<td>DB2 connection ID, if present</td>
</tr>
<tr>
<td>CORR-ID</td>
<td>DB2 correlation ID, if present</td>
</tr>
<tr>
<td>AUTH-ID</td>
<td>DB2 authorization ID, if present</td>
</tr>
<tr>
<td>PLAN</td>
<td>DB2 plan name, if present</td>
</tr>
</tbody>
</table>

**SYSPRINT**

The following information is printed preceding the first report:
- Options that are read from SYSIN
- Filtering and sorting times
Information for data on the TRACEIN file
Information for data that is staged to TRACEWRK
Report Disposition Summary for each printed report

**SYSIN options**

The text is printed for the control statements that are used to produce the reports as in the following example:

```
OPTIONS READ FROM SYSIN:
   REPORT(NAME(BACCTLT,THSQL) -
   QUAL(DB2(DB2T) PLAN(DSN*) ) -
   RECTRACE )
   REPORT(NAME(BACCTLT) QUAL(DB2(DB2Z)) )
SYSIN OPTION SCAN COMPLETE
```

**Filter and sort options**

The times that filtering and presorting the data started and ended is reported as in the following example:

```
BEGINNING DATA FILTER AND PRESORT...13:19:14
DATA FILTER AND PRESORT COMPLETE....13:19:51
```

**TRACEIN information**

The data reported for TRACEIN includes:

- z/OS systems that are represented in the data
- DB2 subsystems that are represented in the data
- Date and time range of the data
- Count of each IFCID that is included
- Total record count

Figure 21 on page 90 shows an example of TRACEIN information.

---

**Figure 21: Example of TRACEIN information**

```
INFORMATION FOR DATA ON FILE TRACEIN:
DATA FOUND FOR THE FOLLOWING SYSTEMS:    SYSM    , MNTM    .
DATA FOUND FOR THE FOLLOWING SUBSYSTEMS: DB2A, DBE1, DBE2, DBE3, DBE4.
DATE-TIME RANGE OF THE DATA IS 05/11/98 19:07:31 TO 08/07/98 18:59:15
RECORD COUNTS BY IFCID:
IFCID-- ---COUNT  IFCID-- ---COUNT  IFCID-- ---COUNT  IFCID-- ---COUNT  IFCID-- ---COUNT
DB2   1     2033  DB2   2     2065  DB2   3      347  DB2  15       19  DB2  17        1
DB2  58        8  DB2  59        5  DB2  63        1  DB2  64        1  DB2  65        1
DB2  66        1  DB2 104       52  DB2 105      741  DB2 106       53  DB2 107      441
BMC 241       72  BMC 242      801  BMC 245      872  BMC 251     801  BMC 254     797
BMC 255     795
TOTAL RECORD COUNT:     9926
```

---

90  MainView for DB2 Performance Reporter User Guide
TRACEWRK information

The information reported for data staged to TRACEWRK includes:

- z/OS systems that are represented in the data
- DB2 subsystems that are represented in the data
- Date and time range of the data
- Count of each IFCID that is included
- Total record count

If no records are selected, no data is displayed, and report processing is terminated. Figure 22 on page 91 shows an example of TRACEWRK information.

Figure 22: Example of TRACEWRK information

| INFORMATION FOR DATA STAGED TO FILE TRACEWRK: |
| DATA FOUND FOR THE FOLLOWING SYSTEMS: SYSO |
| DATA FOUND FOR THE FOLLOWING SUBSYSTEMS: DFE1, DGF1 |
| DATE-TIME RANGE OF THE DATA IS 04/05/06 09:45:11 TO 04/05/06 14:13:08 |
| RECORD COUNTS BY IFCID: IFCID-- ---COUNT IFCID-- ---COUNT IFCID-- ---COUNT IFCID-- ---COUNT IFC |
| DB2 3 55 |
| TOTAL RECORD COUNT: 55 |

Report disposition summary

A Report Disposition Summary is printed for each report.

The following information is included:

- Name of the report and its owner
- Time interval that is covered by the report and the number of periods in the interval
- IFCIDs that are included in the input data (DB2 and BMC)
- Qualifier filter specifications for the report
- IFCIDs that are selected by the report
- Total selected records
- Select file statistics
- Group file statistics
**Figure 23** on page 92 shows an example of the Report Disposition Summary.

### Figure 23: Example of a Report Disposition Summary

```plaintext
REPORT DISPOSITION SUMMARY

REPORT: BACCPLSR OWNER= BMCSftwr    ACTIVE
INTERVAL: 04/12/06 12:04:35 TO 04/12/06 14:39:35 (LOCAL)
PERIODS: 1
DB2 IFICIDS: 3
BMC IFICIDS: QUALIFIERS: Include DB2 ssid *
SELECTED RECORD COUNT BY IFCID:
TOTAL SELECTED RECORD COUNT: 0

------------------- SELECT FILE STATISTICS -------------------------------
Report : BACCPLSR Data source : AM SSID=DC52
Total file size : 0 Kbytes Total record count : 0
Buffer size : 64 Kbytes Last request I/Os : 0
Buffer Limit : 256 Kbytes Cumulative I/O cnt : 0
Timing statistics Elapsed CPU
Total : 00:00:00.000000 00:00:00.000000
Sort setup : 00:00:00.000000 00:00:00.000000
Data input : 00:00:00.011265 00:00:00.004709
Sort : 00:00:00.000006 00:00:00.000000
Data output : 00:00:00.000001 00:00:00.000000
Hiperspace process : 00:00:00.000000 00:00:00.000000
I/O process : 00:00:00.000000 00:00:00.000000

BMCSftwr 5.2.00(12/05) REPORT GENERATOR

--------------------- NORMALIZATION FILE STATISTICS ------------------------
Report : BACCPLSR Data source : AM SSID=DC52
Total file size : 0 Kbytes Total record count : 0
Timing statistics Elapsed CPU
Sort total : 23:55:35.275680 1 01:07:10.2429
Sort setup : 00:00:00.000001 1 14:11:41.8680
Sort : 10:03:02.464576 00:00:00.000000
Data output : 00:00:00.000000 00:00:00.000000
Formula processor : 150 21:39:45.61 00:00:00.000000 F/P req cnt : 0

--------------------- GROUP FILE STATISTICS -------------------------------
Report : BACCPLSR Data source : AM SSID=DC52
Total file size : 097148 Kbytes Total record count : 7479552
Buffer size : 0 Kbytes Last request I/Os : 371008
Buffer Limit : 256 Kbytes Cumulative I/O cnt : 483648
Timing statistics Elapsed CPU
Sort total : 23:55:35.275680 1 01:07:10.2429
Sort setup : 00:00:00.000001 1 14:11:41.8680
Sort : 10:03:02.464576 00:00:00.000000
Data output : 00:00:00.000000 00:00:00.000000
Formula processor : 150 21:39:45.61 00:00:00.000000 F/P req cnt : 0
Hiperspace process : 197 00:02:35.91 74 22:14:16.567 H/S usage : 0 K
I/O process : 00:00:00.004094 00:00:00.524288
Re-sort total : 00:00:00.000000 00:00:00.000000
Re-sort setup : 00:00:00.000000 275 13:52:32.34
Re-sort input : 00:00:00.000000 00:00:00.000000
Re-sort : 00:00:00.000000 00:00:00.000000
```
If messages are issued as a result of the report generation, the messages are printed at the end of the Report Disposition Summary, as shown in Figure 23 on page 92.

**Sample reports**

The requested reports are printed after the last Report Disposition Summary.

These reports are printed in the order in which they were requested in the REPORT statements.

The Data Collector provides a set of reports that has been specifically designed with batch reporting in mind. These reports are 132 columns wide, and their format has been designed to be easy to read.

**Note**

Data Collector reports are printed in mixed case (uppercase and lowercase) by default. If your printer does not support lowercase letters, you need to specify Y in the field labeled Print in upper case only on the Presentation Options panel of the User Profile.

Figure 24 on page 93 is an example of an Accounting Short Trace report.

**Figure 24: Example of Accounting Short Trace report**

<table>
<thead>
<tr>
<th>LOCATION: D6S</th>
<th>ACCOUNTING SHORT TRACE</th>
<th>05/15/06 15:36:20</th>
<th>PAGE</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION:</td>
<td>ACCOUNTING SHORT TRACE</td>
<td>05/15/06 15:36:20</td>
<td>PAGE</td>
<td>1</td>
</tr>
<tr>
<td>PRIMAUTH</td>
<td>CONNECT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D6HAUS</td>
<td>TDOS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D6ESPCS ALLIED</td>
<td>NORMAL DESTRUCTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROGRAM NAME</td>
<td>ALLIED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D6ESM68</td>
<td>00:00:03:153</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D6ESM68</td>
<td>00:00:02:263</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D6ESM68</td>
<td>00:00:03:153</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D6ESM68</td>
<td>00:00:02:263</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chapter 2  Data Collector reporting facilities  93**
Record trace

If record traces are requested, the record trace for each report is printed immediately following the report.

Figure 25 on page 94 shows an example of a record trace report.

**Figure 25: Example of Record Trace**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID</td>
<td></td>
<td></td>
<td>MNTM</td>
</tr>
<tr>
<td>SSID</td>
<td></td>
<td></td>
<td>DBE1</td>
</tr>
<tr>
<td>Rel</td>
<td></td>
<td></td>
<td>4.1</td>
</tr>
<tr>
<td>IFC-Seq</td>
<td></td>
<td></td>
<td>1838</td>
</tr>
<tr>
<td>Loc Name</td>
<td></td>
<td></td>
<td>DBE</td>
</tr>
<tr>
<td>Req Time</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Auth</td>
<td></td>
<td></td>
<td>DOM32</td>
</tr>
<tr>
<td>Oper</td>
<td></td>
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</tr>
<tr>
<td>Net ID</td>
<td></td>
<td></td>
<td>USBMCN01</td>
</tr>
<tr>
<td>SRVNM</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Plan</td>
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<td></td>
<td>DSNESPRR</td>
</tr>
<tr>
<td>Conn</td>
<td></td>
<td></td>
<td>TSO</td>
</tr>
<tr>
<td>LUNAME</td>
<td></td>
<td></td>
<td>DBE1LU</td>
</tr>
<tr>
<td>ProID</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Corr</td>
<td></td>
<td></td>
<td>DOM32</td>
</tr>
<tr>
<td>ConnTyp</td>
<td></td>
<td></td>
<td>TSO</td>
</tr>
<tr>
<td>Instance</td>
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</tr>
<tr>
<td>Commit Ct</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Data Sharing Group Name</td>
<td></td>
<td></td>
<td>DSNDBE</td>
</tr>
<tr>
<td>DB2 Member Name</td>
<td></td>
<td></td>
<td>DBE1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFST FIELD</td>
<td>T</td>
<td>LEN</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>0000</td>
<td>WACBCS</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>0008</td>
<td>WACESC</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>0010</td>
<td>WACBJST</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>0018</td>
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<td>0008</td>
</tr>
<tr>
<td>0020</td>
<td>WACSRB</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>0028</td>
<td>WACESRB</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>0030</td>
<td>WACRNV</td>
<td>B</td>
<td>0004</td>
</tr>
<tr>
<td>0034</td>
<td>WACNID</td>
<td>C</td>
<td>0008</td>
</tr>
<tr>
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<td>0008</td>
</tr>
<tr>
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<td>WACCOMM</td>
<td>N</td>
<td>0004</td>
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<td>WACABRT</td>
<td>N</td>
<td>0004</td>
</tr>
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<td>004C</td>
<td>WACASC</td>
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<td>0008</td>
</tr>
<tr>
<td>0054</td>
<td>WACAJST</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>005C</td>
<td>WACASRB</td>
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</tr>
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</tr>
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</tr>
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</tr>
<tr>
<td>007C</td>
<td>WACWR</td>
<td>T</td>
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</tr>
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</tr>
<tr>
<td>0094</td>
<td>WACALOG</td>
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</tr>
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<td>009C</td>
<td>WACARNL</td>
<td>N</td>
<td>0004</td>
</tr>
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<td>00A0</td>
<td>WACARNN</td>
<td>N</td>
<td>0004</td>
</tr>
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<td>00A4</td>
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<td>N</td>
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</tr>
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<td>N</td>
<td>0004</td>
</tr>
<tr>
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<td>WACALCT</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>00B0</td>
<td>WACARND</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>00B4</td>
<td>WACAWDR</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>00BC</td>
<td>WACWACT</td>
<td>T</td>
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</tr>
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<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>00CB</td>
<td>WACWAR</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>00DC</td>
<td>WACACAR</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>00DD</td>
<td>WACAWAT</td>
<td>T</td>
<td>0008</td>
</tr>
<tr>
<td>00DF</td>
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</tr>
<tr>
<td>00E0</td>
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<td>H</td>
<td>0002</td>
</tr>
<tr>
<td>00E2</td>
<td>WACPKGN</td>
<td>N</td>
<td>0002</td>
</tr>
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<td>00F0</td>
<td>WACPID</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>00F4</td>
<td>WACGET</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>00F8</td>
<td>WACSW</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>0100</td>
<td>WACRID</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>0104</td>
<td>WACSLD</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>0108</td>
<td>WACSNW</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>0110</td>
<td>WACCLPF</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
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<td>WACCHREN</td>
<td>N</td>
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</tr>
<tr>
<td>0124</td>
<td>WACCHRF</td>
<td>N</td>
<td>0004</td>
</tr>
<tr>
<td>0128</td>
<td>WACCHRF</td>
<td>N</td>
<td>0004</td>
</tr>
</tbody>
</table>

Record trace description

The following fields are printed in the header.

In cases where the header fields are missing because no correlation header exists or because the field does not exist in the relevant version of DB2, N/A is printed. The information described in the Field descriptions section are reported for every field displayed in the report.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Header fields</strong></td>
<td></td>
</tr>
<tr>
<td>IFCID</td>
<td>IFCID number and description for the selected record</td>
</tr>
</tbody>
</table>
| SID      | System identifier that is used in SMF records  
This value is specified by your systems programmer in the SMFPRMxx member of PARMLIB by way of the SID parameter. The system identifier can be based on the z/OS system name or processor serial numbers.                                                                                                       |
| SSID     | Subsystem ID and DB2 version number of the DB2 that produced the record                                                                                                                                                                                                                                                                      |
| IFC-Seq  | Traced IFCID sequence number  
This value is derived from the DB2 field QWSCIID.                                                                                                                                                                                                                                                                                        |
| Token    | CICS logical unit of work ID (minus the commit count)  
This value is used to relate CICS records to their associated DB2 records. This value is derived from the DB2 field QWHTOKN. If the value in this field is blank or zero, N/A is printed.                                                                                                                                                     |
| Time     | Timestamp of the selected record in the following format:  
\[mm/ dd/ yy\]  
\[hh.mm.ss.ffffff\]  
   — \textit{mm} (month, possible values 01-12)  
   — \textit{dd} (day, possible values 01-31.  
   — \textit{yy} (year, possible values 00-99.  
   — \textit{hh} (hours, possible values 00-23.  
   — \textit{mm} (minutes, possible values 00-59.  
   — \textit{ss} (seconds, possible values 00-59.  
   — \textit{ffffff} (fraction of a second, possible values 000000-999999  

\textbf{Note:} If the European date format is used, the format for date is \textit{dd/mm/yy}. If the ISO date format is used, the format for date is \textit{yy/mm/dd}.                                                                                                                                         |
| DestSeq  | Destination sequence number  
This value is derived from the DB2 field QWHSWSEQ.                                                                                                                                                                                                                                                                                      |
| ACE      | Agent control element address of the thread  
This value is derived from the DB2 field QWHSACE.                                                                                                                                                                                                                                                                                        |
| Loc Name | Location name of the DB2 subsystem that generated the record  
In a distributed environment, this name is unique among the DB2 subsystems that can communicate with each other. This field is derived from DB2 field QWHSLOCN.                                                                                                                                                            |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Req Loc</td>
<td>Location name of the DB2 subsystem where the distributed request originated If the local location and requesting location are the same, this thread is either an allied or a distributed allied thread. If the locations are different, this thread is a database access thread (DBAT). This field is derived from DB2 field QWHDRQNM.</td>
</tr>
<tr>
<td>Req time</td>
<td>Timestamp from the requesting location when the server recognizes that the thread is a DBAT (database access thread on behalf of remote users) This field is derived from DB2 field QWHDTSTP.</td>
</tr>
<tr>
<td>Auth</td>
<td>DB2 authorization ID that is used by the thread (or the exception list owner for IFCID BMC 246) This field is derived from DB2 field QWHCAID.</td>
</tr>
<tr>
<td>Plan</td>
<td>Name of the DB2 plan that is used by the thread (or the exception list name for IFCID BMC 246) This field is derived from DB2 field QWHCPLAN.</td>
</tr>
<tr>
<td>Corr</td>
<td>Correlation ID, which is used with the connection ID to identify the DB2 task (or the exception measure or formula name for IFCID BMC 246) This field is derived from DB2 field QWHCCV.</td>
</tr>
<tr>
<td>Oper</td>
<td>Original value of the authorization ID before it is changed by any secondary authorization exits This field is derived from DB2 field QWHCOPID.</td>
</tr>
</tbody>
</table>
| Conn      | Connection ID, which identifies the transaction environment Possible values are:  
|           | — BATCH (Batch)  
|           | — TSO (TSO)  
|           | — DB2CALL (DB2 Call-Attach facility)  
|           | — UTILITY (Utility)  
|           | — DB2 SSID (DB2 internal subsystem ID)  
|           | — IMS ID (IMS/VS)  
|           | — CICS ID (CICS)  
|           | — SERVER (Remote unit of work—serving location)  
<p>|           | This field is derived from DB2 field QWHCCN.                                                                                                                                                                                                                                                                                                                      |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ConTyp</td>
<td>Type of connection that is used by the selected thread</td>
</tr>
<tr>
<td></td>
<td>Possible values are:</td>
</tr>
<tr>
<td></td>
<td>— DL/I BTCH (DL/I Batch)</td>
</tr>
<tr>
<td></td>
<td>— TSO (TSO background and foreground)</td>
</tr>
<tr>
<td></td>
<td>— DB2 CALL (DB2 Call-Attach)</td>
</tr>
<tr>
<td></td>
<td>— IMS BMP ATT (IMS BMP Attach)</td>
</tr>
<tr>
<td></td>
<td>— IMS BMP TCN (IMS transaction—driven BMP Attach)</td>
</tr>
<tr>
<td></td>
<td>— IMS MPP ATT (IMS MPP Attach)</td>
</tr>
<tr>
<td></td>
<td>— IMS CNTL RG (IMS Control Region)</td>
</tr>
<tr>
<td></td>
<td>— CICS ATT (CICS Attach)</td>
</tr>
<tr>
<td></td>
<td>— RUW (Remote unit of work)</td>
</tr>
<tr>
<td></td>
<td>— DUW (Distributed unit of work)</td>
</tr>
<tr>
<td></td>
<td>This field is derived from DB2 field QWHCCST.</td>
</tr>
<tr>
<td>Net ID</td>
<td>Network ID</td>
</tr>
<tr>
<td></td>
<td>This value is used with the LUNAME and instance number to identify both the</td>
</tr>
<tr>
<td></td>
<td>local and remote activity of a distributed transaction. This value is derived</td>
</tr>
<tr>
<td></td>
<td>from DB2 field QWHSNID.</td>
</tr>
<tr>
<td>LUNAME</td>
<td>Logical unit name</td>
</tr>
<tr>
<td></td>
<td>This value is used with the network ID and instance number to identify both</td>
</tr>
<tr>
<td></td>
<td>the local and remote activity of a distributed transaction. This value is</td>
</tr>
<tr>
<td></td>
<td>derived from DB2 field QWHSLUNM.</td>
</tr>
<tr>
<td>Instance</td>
<td>Instance number</td>
</tr>
<tr>
<td></td>
<td>This value is used with the network ID and LUNAME to identify both the</td>
</tr>
<tr>
<td></td>
<td>local and remote activity of a distributed transaction. All threads that</td>
</tr>
<tr>
<td></td>
<td>are involved in the same distributed transaction share the same instance</td>
</tr>
<tr>
<td></td>
<td>number. The instance number is printed in hexadecimal format. This value is</td>
</tr>
<tr>
<td></td>
<td>derived from DB2 field QWHSLUUU.</td>
</tr>
<tr>
<td>SRVNAM</td>
<td>Name of the application requester</td>
</tr>
<tr>
<td></td>
<td>If the requester is another DB2 subsystem, this value is the same as the</td>
</tr>
<tr>
<td></td>
<td>requesting location; otherwise the name that is used by the requester is</td>
</tr>
<tr>
<td></td>
<td>printed. This value is derived from DB2 field QWHDSVNM.</td>
</tr>
<tr>
<td>PRDID</td>
<td>Product ID of the requester</td>
</tr>
<tr>
<td></td>
<td>This value is derived from DB2 field QWHDRPID.</td>
</tr>
<tr>
<td>Commit Ct</td>
<td>Logical unit of work sequence number</td>
</tr>
<tr>
<td></td>
<td>This value is derived from DB2 field QWHSLUCC.</td>
</tr>
<tr>
<td>Data Sharing</td>
<td>Name of the data sharing group to which this DB2 belongs</td>
</tr>
<tr>
<td>Group Name</td>
<td></td>
</tr>
<tr>
<td>DB2 Member Name</td>
<td>Member name of this DB2 in the data sharing group</td>
</tr>
<tr>
<td>Report fields</td>
<td></td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFST</td>
<td>Offset (in hexadecimal format) of this field from the beginning of the DSECT in the selected record</td>
</tr>
<tr>
<td>Field</td>
<td>Name of this field in the selected record</td>
</tr>
</tbody>
</table>
| T     | Data type  
Possible values are:  
— T (time or DB2 store clock time)  
— C (character—fixed or variable length)  
— N (numeric—integer, decimal, or floating point)  
— H (hexadecimal)  
— B (bit map) |
| LEN   | Length (in hexadecimal format) of this field  
This is the length of the field within the record, not the length of the formatted output printed. |
| Description | Description of the field |
| Value | Value from this field in the selected record  
If the data type is B or H, the value is displayed in hexadecimal format. If the value is too large to be printed in the space that is provided, the space is filled with asterisks (***) followed by the words SEE BELOW. The value is printed on the following line starting from the extreme left. |

### Recommendations

Millions of lines of output can be generated when running batch reports.

A very large volume of output could fill the spool and cause system problems that could result in an IPL.

Most sites limit the number of lines of output for a job. Your z/OS systems programmer should know if your site uses a SYSOUT limit exit routine. If your site does not limit output, you can restrict the output that is produced by your report by using the OUTLIM JCL parameter on the //REPORT DD of the DOMBRPT1 job, as shown in the following example:

```
//REPORT DD SYSOUT=*,OUTLIM=30000
```

The OUTLIM parameter in this example limits the job’s output to 30,000 lines. If the limit that you specify is exceeded, your batch report job terminates with a 722 abend, indicating that the OUTLIM limit was exceeded.
You can also use the OUTLIM statement to limit the number of groups reported in batch reports (see “OUTLIM statement and parameter” on page 85).

Finding problems with dynamic SQL

The BTHDASUM, BTHDADTL, THSQLDYN and THSQLDYS reports can help you find dynamic SQL that is causing a problem.

The reports run against historical data and are most effective when used together. BTHDASUM provides summary thread information, which can help you determine when a problem occurred. You can then run BTHDADTL for that time period to get detailed thread information. Similarly, THSQLDYN provides summary dynamic SQL and miniplan information, and then THSQLDYS provides more detailed information.

Running the detail reports (BTHDADTL and THSQLDYS) against a long time period of data can result in excessively long and cumbersome reports. To avoid this situation, be sure to run the summary reports first to determine how to best qualify the detail reports. For example, you might run the reports in the following sequence.

1 Run the BTHDASUM report to determine the interval in which a problem occurred.
2 Run the BTHDADTL detail report against the problem interval to determine which thread might be causing the problem.
3 Run the THSQLDYN report to obtain SQL miniplan summary information.
4 Run the THSQLDYS report to identify the SQL and to expand the report to display the SQL text.

THSQLDYN can also be run online from the EZDEVENT view Dynamic Sql/Mini Plan option. From the online report, you can zoom on the SQL to explain it in even greater detail.

Before running the THSQLDYN and THSQLDYS batch reports, a DB2 trace of IFCIDs 22 and 63 must be activated as described in “Activating optional IFCIDs for batch reporting” on page 31.

When THSQLDYN is run online from the EZDEVENT view, IFCIDs 22 and 63 are started automatically.
For samples of these reports, see “Sample Data Collector reports” on page 481.
SMF extract, reporting, and table update (DPRSMF)

This section describes the DPRSMF batch job.

The purpose of DPRSMF is to extract DB2 SMF statistics, accounting, and audit records and load this data into the performance data tables in Performance Reporter. The DPRSMF job stream can be tailored to produce accounting and statistics reports during the daily SMF extract, either in addition to, or in place of, loading the data into DB2 tables. The extract files can also be saved for later reporting with the DPRSMFR job.

The SMF data set and control statements describing the DB2 tables to be loaded are the input to this procedure. The output of this process is the extracted data added to the detail performance data tables and, optionally, accounting and statistics reports or extract files.

The following methods are used for loading the DB2 tables:

- The IBM LOAD method, which uses the IBM DSNUTILB utility
- The BMC NGT Load method, which uses the BMC Next Generation Technology Load for DB2 for z/OS (NGT Load) product
- The BMC LOADPLUS method, which uses the BMC LOADPLUS product

Note
BMC NGT Load is the preferred BMC table load utility. Future releases of MainView for DB2 will not support BMC LOADPLUS.

For more information about these methods, see the MainView for DB2 Customization Guide.

Sample JCL members are provided to execute the DPRSMF job stream as part of the MVDB2/DC archive data set creation process. These members are provided in BBSAMP as DPRARC (IBM LOAD method), DPRARCLP (BMC LOADPLUS
method), and DPRARCNL (BMC NGT Load method). For more information, see the MainView for DB2 Customization Guide.

DPRSMF job control statements

SMF data extraction is a multi-step batch execution procedure.

This procedure can be run stand-alone against the SMF data sets or can be incorporated into an existing job that also processes this data. It can be broken down into its component parts. Generation data groups or other permanent data set types can be used to store and pass the data between runs of the various steps. Some steps, such as the table load, can be delayed until end of the day processing. Table 24 on page 102 describes the steps in this procedure. For a sample of the job control statements, see “Sample DPRSMF JCL” on page 115.

The procedure symbolics can be specified to disable either the summarization / load steps or the report steps. The accounting and statistics extract files can be temporary or kept for additional reporting later.

Table 24: SMF data extraction steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extract the DB2 statistics, accounting, and audit records from the input SMF file, creating temporary statistics, accounting, and audit files. Control statements allow the selection of data of only certain specified record types or from specific DB2 subsystems. For more information, see “Step 1—SMF extract and file creation” on page 103.</td>
</tr>
<tr>
<td>2</td>
<td>Create discrete interval records from the cumulative statistics records. To consolidate any statistics intervals that span an SMF tape, this step maintains a spin file which resolves issues caused by processing the SMF tape out of sequence. For more information, see “Step 2—Statistics consolidation” on page 111.</td>
</tr>
<tr>
<td>3</td>
<td>Build DB2 load control statements, summarize accounting and statistics records, and purge old records. Control statements allow the specification of the tables in which the extracted data is to be loaded and whether summarization should occur before the load. Other statements allow existing table data to be purged or unloaded. For more information, see “Step 3—DB2 performance data tables load procedure” on page 112.</td>
</tr>
<tr>
<td>4</td>
<td>Load the performance data tables. You must have the proper DB2 authorization for this step. For more information, see “Step 4—Load into DB2 tables” on page 113.</td>
</tr>
</tbody>
</table>
**Step 1—SMF extract and file creation**

This step specifies the name of the Performance Reporter statistics, accounting, and audit file creation program as PGM=DPRDSMF and the region required to run the program.

*Table 25 on page 103* describes the SMF extract DD statements.

### Table 25: SMF extract DD statements

<table>
<thead>
<tr>
<th>JCL statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEPLIB DD</td>
<td>Defines the program library containing the DPRDSMF load module</td>
</tr>
<tr>
<td>DPRLOG DD</td>
<td>Defines the data set for the program results summary which indicates input and output record counts</td>
</tr>
<tr>
<td>SYSOUT DD</td>
<td>Defines the data set for the program results summary, which indicates input and output record counts</td>
</tr>
<tr>
<td>SYSUDUMP DD</td>
<td>Defines the dump data set for problem determination</td>
</tr>
<tr>
<td>DPDACCT DD</td>
<td>Contains the accounting records created from the DB2 SMF 101 accounting records for TYPE=ACCT and, optionally, for PKGACCT, DDFACCT, BUFACCT</td>
</tr>
<tr>
<td></td>
<td>For improved performance in STEP3 SUMMARIZE and STEP4 LOAD processing, it is recommended that DPDACPKG, DPDACDDF, and DPDACBUF DD statements be used for accounting data other than TYPE=ACCT.</td>
</tr>
<tr>
<td>DPDACPKG DD</td>
<td>(Optional) If present, this statement contains the package accounting records (PKGACCT) created from the DB2 SMF 101 accounting records</td>
</tr>
<tr>
<td></td>
<td>This file is passed to STEP3 ACPKGDD and is concatenated to the STEP6 DPDACCT DD statement. If this statement is not present, PKGACCT records are written to DPDACCT.</td>
</tr>
<tr>
<td>DPDACDDF DD</td>
<td>(Optional) If present, this statement contains the DDF accounting records (DDFACCT) created from the DB2 SMF 101 accounting records</td>
</tr>
<tr>
<td></td>
<td>This file is passed to STEP3 ACDDFDD and is concatenated to the STEP6 DPDACCT DD statement. If this statement is not present, DDFACCT records are written to DPDACCT.</td>
</tr>
<tr>
<td>DPDACBUF DD</td>
<td>(Optional) If present, this statement contains the buffer accounting records (BUFACCT) created from the DB2 SMF 101 accounting records</td>
</tr>
<tr>
<td></td>
<td>This file is passed to STEP3 ACBUFDD. If this statement is not present, BUFACCT records are written to DPDACCT.</td>
</tr>
<tr>
<td>DPDSTAT DD</td>
<td>Contains the statistics records created from the DB2 SMF 100 statistics records. This file is passed to the statistics consolidation step. For more information, see “Step 2—Statistics consolidation” on page 111.</td>
</tr>
<tr>
<td>DPDAUDIT DD</td>
<td>Contains the audit records created from the DB2 SMF 102 audit records. This file is passed to the load into DB2 tables step. For more information, see “Step 4—Load into DB2 tables” on page 113.</td>
</tr>
<tr>
<td>JCL statement</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SORTIN DD or DPRINPUT DD</td>
<td>Defines the data (an SMF data set or DOM archive data set) to be extracted and sorted. The DPRINPUT DD statement is optional. If the SORT=NO control statement is specified, the DPRDSMF program attempts to extract the data from the DPRINPUT DD data set; if the DPRINPUT DD statement is omitted, DPRDSMF extracts the data from the SORTIN DD data set. For more information about SORT=NO, see Table 26 on page 105.</td>
</tr>
<tr>
<td>SORTWKnn DD</td>
<td>Defines work data sets for data sorting; nn is a numeric. The SORTWKnn DD is not required if the SORT=NO control statement is specified. For more information about SORT=NO, see Table 26 on page 105.</td>
</tr>
</tbody>
</table>
| DPRCNTL DD                    | Defines the DB2 subsystem and the selection of data types by using the following control statements (described in Table 26 on page 105):  
  - DATE=  
  - EXCLUDEPKG=  
  - SHORTREC=[YES | NO]  
  - SORT=[YES | NO | COPY]  
  - SSID=  
  - TCCSID=  
  - TIME=  
  - TYPE=  
  - TYPE2=  
  - TYPE3=  
  - TYPE4=  |
| DFSPARM DD                    | Specifies the VLSHRT override option (for DFSORT users only)  
  VLSHRT—Temporarily overrides the VLSHRT installation option. DFSORT continues processing if a variable-length input record is too short to contain all specified INCLUDE compare fields.  
  **Note:** This override parameter is necessary only if you receive the following messages in the job output:  
  - Message DPR0104I  
  - Return code 16  
  - An error message from the sort routine indicating that an SMF record is too short  
  This method of processing short SMF records provides better performance than using the SHORTREC control statement. However, this option works only with DFSORT Release 11.1 or higher. If using any other sort routine, you need to add the SHORTREC control statement. |

Table 26 on page 105 describes the control statements for the DPRCNTL SMF Extract Control Statement.
Table 26: DPRCNTL DD control statements

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSID=</td>
<td>Defines the DB2 subsystem IDs that are desired when you want to select only certain DB2 subsystem IDs from the SMF data as it is read. If this operand is omitted, all subsystems are selected. As many as 10 entries may be entered, enclosed in parentheses and separated by commas.</td>
</tr>
</tbody>
</table>
| SHORTREC=[YES|NO] | Allows selection by DB2 subsystem ID from SMF data with records shorter than 18 bytes.  
**Note:** This control statement is recommended only if you have specified SSIDs and receive message DPR0104I or SYNCSORT message WER250A. You will receive this message if some of the SMF records are shorter than 18 bytes and the VLSHRT option is not applicable to your SORT routine.  
If you are using DFSORT Release 11.1 or higher, see the description for the DFSPARM DD value in Table 25 on page 103 for more information. |
**Value** | **Description**
---|---
SORT= [YES | NO | COPY] | Determines whether input records are sorted

The sort is required to ensure that the input records are in chronological order. However, if the input records are already in chronological order, you can bypass the sort and reduce CPU usage, I/O, elapsed time, and DASD usage.

SORT= YES is the default. You should specify YES when multiple files are being extracted, and the files might not be in chronological order.

SORT= NO or SORT= COPY can be specified in the following situations:

- The DPRSMF job runs at intervals during the day, each time an MVDB2/DC archive file is created and used as input. This method is recommended because it breaks the processing into smaller, incremental jobs throughout the day and produces chronologically ordered input records.

- The DPRSMF job runs at intervals during the day by using input SMF files from one LPAR. Processing one file at a time does not require a sort.

- Multiple files (SMF files or MVDB2/DC archive files) can be used as input to DPRSMF, provided they are processed in chronological order. However, often these files are managed as Generation Data Groups (GDGs), and the IBM default order when specifying only a GDG base name is descending (newest first). In this situation, the input files must be ordered chronologically. BMC Software does not provide a tool to re-order the files, however such tools are available. If the files are from one CDC or LPAR, and are in chronological order, the sort is not needed.

SORT= NO and SORT= COPY are functionally equivalent. SORT= NO uses written I/O and comparison routines written by BMC to read and process the input. SORT= COPY uses optimized SORT I/O and comparison routines. In any of the situations described above, either SORT= NO or SORT= COPY should improve processing time. The improvement will vary from environment to environment, and sufficient testing is needed to determine which option provides the best results. It might also be beneficial to experiment with various SORT parameters through the use of the DFS Parm (DFSORT) or $ORT Parm (Syncsort) DD statement.

**Note:** Files from multiple LPARs, even within a sysplex, cannot be processed with SORT= NO or SORT= COPY. When data from multiple data sharing members is consolidated into one set of DB2 tables, the DPRSMF job must be run separately for each DB2 or LPAR. The DPRDSMF program verifies that the input is in chronological order when SORT= NO or SORT= COPY is specified.
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| **TYPE=** | Allows selection of only the following of SMF accounting and statistics data:  
- ACCT (accounting base data)  
- PKGACCT (package accounting data)  
- DDFACCT (DDF accounting data)  
- BUFACCT (detail buffer accounting data per pool)  
- STAT (statistics data, including buffer statistics)  
- DDFSTAT (DDF statistics data)  
- BUFSTAT (detail buffer statistics data per pool)  
These keywords may be entered in any combination, enclosed in parentheses and separated by commas. If this entry and TYPE2 are not coded, all accounting and statistics types are selected. |
| **TYPE2=** | Allows selection of these audit data types:  
- AUDFAIL (authorization failures data)  
- AUDGRV (authorization control - GRANTs/REVOKEs data)  
- AUDDDL (DDL access data)  
- AUDDML (DML access data)  
- AUDDMB (DML at BIND)  
- AUDCHG (authorization ID change data)  
- AUDUTL (utility access data)  
- AUDSUM (summary data)  
These keywords may be typed in any combination, enclosed in parentheses and separated by commas. Audit data types are not selected unless TYPE2 is specified. |
| **TYPE3=** | Allows selection of these statistics data types:  
- ASPCSTOR (storage address space table data)  
- SYSTSTOR (storage system table data)  
- AUDCMD (audit command table)  
- AUDATH (audit authorization table)  
- AUDTRC (audit traced table)  
These keywords may be typed in any combination, enclosed in parentheses and separated by commas. |
| **TYPE4=** | Allows selection of these accelerator or simulated bufferpool data types:  
- ACCA (accelerator data)  
- ACCS (accelerator summary data)  
- SYMB (simulated bufferpool data) |
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCLUDEPKG=</td>
<td>Allows specific package accounting records to be excluded</td>
</tr>
<tr>
<td></td>
<td>Possible keywords are:</td>
</tr>
<tr>
<td></td>
<td>■ PROGRAMNAME (program name—package ID or DBRM)</td>
</tr>
<tr>
<td></td>
<td>■ FIRSTPKG (first package or DBRM executed)</td>
</tr>
<tr>
<td></td>
<td>■ CORRID (correlation ID value)</td>
</tr>
<tr>
<td></td>
<td>■ CONNECTION (connection name)</td>
</tr>
<tr>
<td></td>
<td>■ CONTYPE (connection type)</td>
</tr>
<tr>
<td></td>
<td>■ PLAN (plan name)</td>
</tr>
<tr>
<td></td>
<td>■ AUTHID (primary authorization ID)</td>
</tr>
<tr>
<td></td>
<td>Up to eight values can be specified for each keyword. For example:</td>
</tr>
<tr>
<td></td>
<td>■ EXCLUDEPKG PROGRAMNAME=DSNESM68,</td>
</tr>
<tr>
<td></td>
<td>■ CORRID=(PKGCORR1,PKGCORR2,PKGCORR3XXXX,BOLHHH4),</td>
</tr>
<tr>
<td></td>
<td>■ CONNECTION=(PKGCONN1,PKGCONN2,PKGCONN3,‘DB2 CALL’),</td>
</tr>
<tr>
<td></td>
<td>■ CONTYPE=(PKGCONT1,PKGCONT2,PKGCONT3,’DB2 CALL’),</td>
</tr>
<tr>
<td></td>
<td>■ PLAN=(PKGPLAN1,PKGPLAN2,PKGPLAN3,‘DSNTIA51’),</td>
</tr>
<tr>
<td></td>
<td>■ AUTHID=((PKGAUTH1,PKGAUTH2,PKGAUTH3,BOLCJN2),FIRSTPKG=(PKG11,PKG12,PKG1</td>
</tr>
<tr>
<td></td>
<td>3XXXXXXXXXXXXXXX,TSMCOM2,PKG15,PKG16,PKG17XXXXXXXXXXXXXX,TSMCOMX)</td>
</tr>
<tr>
<td></td>
<td>Excludes from package accounting (PKGACCT) all records with values matching</td>
</tr>
<tr>
<td></td>
<td>those specified.</td>
</tr>
<tr>
<td></td>
<td>For comparison values for the CONTYPE= keyword, see the CONTYPE column in</td>
</tr>
<tr>
<td></td>
<td>“Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>DATE=</td>
<td>Can be used to select records only from specific date ranges:</td>
</tr>
<tr>
<td></td>
<td>■ DATE=01JAN2002-01FEB2002 (records for all of JAN 2002)</td>
</tr>
<tr>
<td></td>
<td>■ DATE=<em>_1-</em> (records from yesterday)</td>
</tr>
<tr>
<td></td>
<td>■ DATE=*_3 (records for previous 3 days plus today)</td>
</tr>
<tr>
<td>TIME=</td>
<td>Can be used to select records only from specific time ranges:</td>
</tr>
<tr>
<td></td>
<td>■ TIME=0800-1700 (first shift records only)</td>
</tr>
<tr>
<td></td>
<td>■ TIME=0800 (records from 8AM to midnight)</td>
</tr>
</tbody>
</table>
### Value | Description
--- | ---
TCCSID= | Specifies the target CCSID for translation of Unicode data
The default is CCSID 37 (US EBCDIC).
For example:
- TCCSID=1140 (US EBCDIC with Euro)
- TCCSID=273 (United Kingdom EBCDIC)
- TCCSID=1143 (Germany/Austria EBCDIC with Euro)
- TCCSID=1147 (France EBCDIC with Euro)
- TCCSID=260 (Canada French 116 character EBCDIC)

z/OS Unicode Conversion Services must be properly configured with the appropriate translation tables (CCSID 1208-target). See the z/OS Support for Unicode: Using Conversion Services manual.

#### Timezone Adjustment Process
The following keywords refer to the timezone adjustment process. Supply the parameters in TZPARM only when local time is not equal to Greenwich mean time at your shop (a non-zero value is in SYS1.PARMLIB member CLOCKXX). Type 100 and 101 SMF records for DB2 contain Greenwich mean time. TZPARM must contain the correct parameters for the DPRSMF program to convert Greenwich mean time to local time.
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIMEZONE=</td>
<td>Defines the adjustment amount</td>
</tr>
<tr>
<td>(Optional)</td>
<td>Sample parameters for the first SMF group are:</td>
</tr>
<tr>
<td></td>
<td>- SMFID=SYSA</td>
</tr>
<tr>
<td></td>
<td>- TZSTART=1991-04-01-02.00.00,TIMEZONE=W.05.00.00</td>
</tr>
<tr>
<td></td>
<td>- TZSTART=1991-10-28-02.00.00,TIMEZONE=W.06.00.00</td>
</tr>
<tr>
<td></td>
<td>Sample parameters for the second SMF group are:</td>
</tr>
<tr>
<td></td>
<td>- SMFID=SYSB</td>
</tr>
<tr>
<td></td>
<td>- 1-04-01-01.00.00,TIMEZONE=W.05.00.00</td>
</tr>
<tr>
<td></td>
<td>- TZSTART=1991-10-28-04.00.00,TIMEZONE=W.06.00.00</td>
</tr>
<tr>
<td></td>
<td>Syntax rules are as follows:</td>
</tr>
<tr>
<td></td>
<td>- No blank spaces are allowed between parameters within a line.</td>
</tr>
<tr>
<td></td>
<td>- All preceding zeros are required for month, day, and time. For example, specify 04 for the month of April.</td>
</tr>
<tr>
<td></td>
<td>- A maximum of 40 TZSTART/TIMEZONE entries are allowed.</td>
</tr>
<tr>
<td></td>
<td>- Because of the difference between daylight savings and standard time zones, a minimum of two datetime entries is required for each SMF group entry.</td>
</tr>
<tr>
<td></td>
<td>- If the SMFID is not specified, the datetime entries apply to all DB2 SMF records encountered.</td>
</tr>
<tr>
<td></td>
<td>- When the SMFID is specified, the associated datetime entries apply only to the DB2 SMF records with the specified SMFID.</td>
</tr>
<tr>
<td></td>
<td>- The timestamp of the datetime entry indicates the local time when the change of timezone occurs. For example</td>
</tr>
<tr>
<td></td>
<td>- TZSTART=1991-04-01-02.00.00,TIMEZONE=W.05.00.00</td>
</tr>
<tr>
<td></td>
<td>- indicates the TIMEZONE value was changed to W.05.00.00 at local time 1991-04-01-02.00.00.</td>
</tr>
<tr>
<td>SMFID=</td>
<td>Defines the SMF ID for which the following timezone parameters apply</td>
</tr>
<tr>
<td></td>
<td>If the timezone parameters apply for all SMF IDs which may be processed, it is not necessary to include SMFID. Do not include some TZSTART/TIMEZONE combinations without a qualifying SMFID, and other TZSTART/TIMEZONE combinations after the qualifier.</td>
</tr>
<tr>
<td>TZSTART=</td>
<td>Defines the starting time after which the adjustment is made to any datetime fields</td>
</tr>
<tr>
<td></td>
<td>Its data field is in datetime format.</td>
</tr>
</tbody>
</table>
General syntax rules

The general rules for coding the operands are the same as those for the operands in SUM/PURGE.

- If operands are to be continued, end the first line with a comma-blank.
- Comments are allowed after a blank.
- Comment lines are designated by an asterisk in column 1.
- If a value contains special characters such as blank, equal sign, or comma, enclose the value in quotation marks.
- Multiple values for a keyword are enclosed in parentheses and separated by commas.
- Multiple keywords may be coded on a single line, separated by commas.
- Undefined keywords, invalid values, missing delimiters, and such generate error messages.

Step 2—Statistics consolidation

This step specifies the name of the Performance Reporter statistics consolidation program as PGM=DPRSTAT and the region required to run the program.

Table 27 on page 111 describes the DD statements that are used in this step.

Table 27: Statistics consolidation DD statements

<table>
<thead>
<tr>
<th>JCL Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEPLIB DD</td>
<td>Defines the program library containing the DPRSTAT load module</td>
</tr>
<tr>
<td>DPRLOG DD</td>
<td>Defines the data set for DPRSTAT results</td>
</tr>
<tr>
<td>SYSOUT DD</td>
<td>Defines the output class</td>
</tr>
<tr>
<td>SYSUDUMP DD</td>
<td>Defines the dump data set for problem determination</td>
</tr>
<tr>
<td>SORTIN DD</td>
<td>Defines the statistics record file (input file) passed from Step 1</td>
</tr>
</tbody>
</table>
### JCL Statement Description

#### DPDSPIN DD
Defines a spin file to retain SMF statistics records that end a period to resolve intervals on subsequent SMF processing. The spin file is useful only when the same input source (such as an SMF Generation Data Group or Data Collector archive) is used for each DPRSMF run. When the DPRSMF job runs, information from the last SMF statistics record encountered for each DB2 subsystem is written to the spin file and then used as the first record for the next DPRSMF run. The DPRSMF job must run at regular intervals to ensure that no intervals are lost. If DPRSMF does not run at regular intervals, allocate a new spin file for each run. DMRSMF allocates the spin file with DISP=OLD. To create a new spin file, use the BBSAMP sample JCL member DPJSPIN.

#### DPDSTAT DD
Defines the final statistics record file ready to be loaded to DB2 tables (output file). This file is passed to Step 4 STATDD and to Step 5 DPDSTAT.

#### SORTWKnn DD
Defines work data sets for data sorting; nn is a numeric.

---

### Step 3—DB2 performance data tables load procedure

This step specifies the name of the Performance Reporter summary load control program as PGM=DPSUMLD.

Table 28 on page 112 describes the DD statements that are used in this step.

**Table 28: DB2 performance data tables load procedure DD statements**

<table>
<thead>
<tr>
<th>JCL Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEPLIB DD</td>
<td>Defines the program library containing the DB2 load library and the Performance Reporter load library</td>
</tr>
<tr>
<td>DPSYSOUT DD</td>
<td>Defines the data set for DPSUMLD results</td>
</tr>
<tr>
<td>SYSOUT DD</td>
<td>Defines the output class</td>
</tr>
<tr>
<td>SYSUDUMP DD</td>
<td>Defines the dump data set for problem determination</td>
</tr>
<tr>
<td>SORTWKnn DD</td>
<td>Defines work data sets for data sorting; nn is a numeric</td>
</tr>
<tr>
<td>ACCTDD DD</td>
<td>Defines the input data set for the ACCT LOAD and SUMMARIZE process. Optionally, defines the input data set for the PKGACCT, DDFACCT, and BUFACCT LOAD and SUMMARIZE processes if separate data sets were not used in Step 1.</td>
</tr>
<tr>
<td>STATDD DD</td>
<td>Defines the input data set for the STAT LOAD and SUMMARIZE process. Optionally, defines the input data set for the DDFACCT and BUFACCT LOAD and SUMMARIZE processes.</td>
</tr>
<tr>
<td>JCL Statement</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ACPKGDD DD</td>
<td>Defines the input data set for the PKGACCT LOAD and SUMMARIZE process</td>
</tr>
<tr>
<td>(Optional)</td>
<td>If this statement is not present, the ACCTDD input data set is used.</td>
</tr>
<tr>
<td>ACDDFDD DD</td>
<td>Defines the input data set for the DDFACCT LOAD and SUMMARIZE process</td>
</tr>
<tr>
<td>(Optional)</td>
<td>If this statement is not present, the ACCTDD input data set is used.</td>
</tr>
<tr>
<td>ACBUFDD DD</td>
<td>Defines the input data set for the BUFACCT LOAD and SUMMARIZE process</td>
</tr>
<tr>
<td>(Optional)</td>
<td>If this statement is not present, the ACCTDD input data set is used.</td>
</tr>
<tr>
<td>SUMACCT DD</td>
<td>Defines the output data set for the ACCT SUMMARIZE process</td>
</tr>
<tr>
<td>DDFSACCT DD</td>
<td>Defines the output data set for the DDFACCT SUMMARIZE process</td>
</tr>
<tr>
<td>PKGSACCT DD</td>
<td>Defines the output data set for the package PKGACCT SUMMARIZE process</td>
</tr>
<tr>
<td>BUFSACCT DD</td>
<td>Defines the output data set for the Buffer Pool BUFACCT SUMMARIZE process</td>
</tr>
<tr>
<td>SUMMSTAT DD</td>
<td>Defines the output data set for the STAT SUMMARIZE process</td>
</tr>
<tr>
<td>DDFSSTAT DD</td>
<td>Defines the output data set for the DDFSTAT SUMMARIZE process</td>
</tr>
<tr>
<td>BUFSSTAT DD</td>
<td>Defines the output data set for the BUFSTAT SUMMARIZE process</td>
</tr>
<tr>
<td>DPLOAD DD</td>
<td>Defines the data set for DB2 LOAD control statements</td>
</tr>
<tr>
<td>DPSYSIN DD</td>
<td>Defines the data set containing the control statements for the DPSUMLD program</td>
</tr>
</tbody>
</table>

Note

The procedure symbolic SUMPGM can be changed to IEFBR14 to disable this step.

Step 4—Load into DB2 tables

This step specifies the name of the DB2 Utility program and the region that is required to run the program.

The steps to load the DB2 tables use one of the following utilities:

- DSNUTILB (IBM LOAD method)
- NGTUTIL (NGT Load utility)
- AMUUMAIN (BMC LOADPLUS utility)

Note

BMC NGT Load is the preferred BMC table load utility. Future releases of MainView for DB2 will not support BMC LOADPLUS.

If your installation uses a different utility, you must modify your JCL. The utility must be able to interpret LOAD control statements in the same format that DSNUTILB uses.
**Note**
The procedure symbolic LOADPGM can be changed to IEFBR14 to disable this step.

Table 29 on page 114 describes the DD statements that are used in this step.

### Table 29: DB2 load statements

<table>
<thead>
<tr>
<th>JCL Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACBUFDD DD</td>
<td>Defines the input data set for the BUFACCT data for the LOAD utility</td>
</tr>
<tr>
<td></td>
<td>If this statement is not present, the ACCTDD input data set is used.</td>
</tr>
<tr>
<td>ACCTDD DD</td>
<td>Defines the input data set for ACCT data for the LOAD utility</td>
</tr>
<tr>
<td></td>
<td>Optionally, defines the input data set for the PKGACCT, DDFACCT, and</td>
</tr>
<tr>
<td></td>
<td>BUFACCT data for the LOAD utility</td>
</tr>
<tr>
<td>ACDDFDD DD</td>
<td>Defines the input data set for the DDFACCT data for the LOAD utility</td>
</tr>
<tr>
<td></td>
<td>If this statement is not present, the ACCTDD input data set is used.</td>
</tr>
<tr>
<td>ACPKGDD DD</td>
<td>Defines the input data set for the PKGACCT data for the LOAD utility</td>
</tr>
<tr>
<td></td>
<td>If this statement is not present, the ACCTDD input data set is used.</td>
</tr>
<tr>
<td>AUDITDD DD</td>
<td>Defines the input data set for the AUDIT LOAD utility</td>
</tr>
<tr>
<td>BUFSACCT DD</td>
<td>Defines the input data set containing Buffer Summary data, for the</td>
</tr>
<tr>
<td></td>
<td>BUFACCT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>BUFSSTAT DD</td>
<td>Defines the input data set for the BUFSTAT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>CDBCKPT DD</td>
<td>Defines the data set containing checkpoint/restart information</td>
</tr>
<tr>
<td>CDBEXEC DD</td>
<td>Defines automation support</td>
</tr>
<tr>
<td>DDFSACCT DD</td>
<td>Defines the input data set for the DDFACCT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>DDFSSTAT DD</td>
<td>Defines the input data set for the DDFSTAT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>PKGSACCT DD</td>
<td>Defines the input data set for the PKGACCT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>SORTOUT DD</td>
<td>Defines the data set for the SORT output</td>
</tr>
<tr>
<td>SORTWKnn DD</td>
<td>Defines work data sets for data sorting; nn is a numeric</td>
</tr>
<tr>
<td>STATDD DD</td>
<td>Defines the input data set for the STAT LOAD utility</td>
</tr>
<tr>
<td>STEPLIB DD</td>
<td>Defines the program library containing the DB2 load library</td>
</tr>
<tr>
<td>SUMMACCT DD</td>
<td>Defines the input data set for the ACCT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>SUMMSTAT DD</td>
<td>Defines the input data set for the STAT SUMMARY LOAD utility</td>
</tr>
<tr>
<td>SYSDISC DD</td>
<td><strong>(for the BMC LOADPLUS method only)</strong> Required for LOADPLUS processing,</td>
</tr>
<tr>
<td></td>
<td>but not used</td>
</tr>
<tr>
<td>SYSSERR DD</td>
<td><strong>(for the BMC LOADPLUS method only)</strong> LOADPLUS work data set, containing</td>
</tr>
<tr>
<td></td>
<td>records with conversion errors</td>
</tr>
</tbody>
</table>
Sample DPRSMF JCL

The following BBSAMP members contain sample job control statements:

- DPRSMF (IBM LOAD method)
- DPRSMFNL (BMC NGT Load method)
- DPRSMFPLP (BMC LOADPLUS method)

For example, Figure 26 on page 115 shows the sample statements from DPRSMF for the IBM LOAD method. For the NGT Load and LOADPLUS samples, see DPRSMFNL and DPRSMFPLP.

Figure 26: Sample job control statements from BBSAMP member DPRSMF (IBM LOAD method)

```plaintext
//DPRSMF JOB
//*------------------------------------------------------------*
//* JOB TO EXTRACT DB2-RELATED RECORDS FROM                     *
//* SMF OR MVDB2-DATA COLLECTOR ARCHIVE FILES AND LOAD          *
//* THEM INTO MVDB2 PERFORMANCE REPORTER TABLES                  *
//* FOR REPORTING.                                              *
//* NOTE: SEE OVER-RIDE STEP: STEP1.DFSPARM DD *                *
//* THE ENTRY: MODS E15=(DPRSE15,0..N)                         *
//* IS VALID FOR BOTH DFSORT AND SYNCSORT AND IT WILL           *
//* LOAD THE DPRSE15 LOAD MODULE FROM EITHER STEPLIB,           *
//* LINKLIST, OR THE JOBLIB DD.                                 *
//* NOTE: FOR INPUT FROM MVDB2-DATA COLLECTOR ARCHIVE FILES,    *
//* SPECIFY THE DSNNAME WITH THE SMF PARAMETER.                 *
//* NOTE: FOR ACCT, DDFACT, PKGACCT, BUFACCT SEPARATE STEP1     *
//* OUTPUT FILES ARE SUPPORTED.                                 *
//*------------------------------------------------------------*
//DPPSMF PROC HIDP='HILVL.RUN.LIB', <-- UPDATE
// HIDB2=DSN1210, <-- VERIFY
// SMF='SYS3.SMF.DAILY(0)', <-- SMF DATASET
// UNIT=SYSQA, <-- VERIFY
//* THE FOLLOWING IS FOR DB2 LOAD UTILITY
// SYSTEM=DDDD, <-- UPDATE
// UID=ANYUTID, <-- UPDATE
//* THE FOLLOWING IS FOR REPORTS FROM SMF
// RPTHI=HILVL, <-- UPDATE
```
// RPTUNIT=SYSDA,  <-- VERIFY  
// DSSTAT=NEW,  <-- OR OLD STAT  
// THE FOLLOWING CAN DISABLE SUM / LOAD  
// SUMPGM=DPSUMLD,  <-- OR IEFBR14  
// LOADPGM=DSNUTILB  <-- OR IEFBR14  
//  
// EXTRACT 100 AND 101 RECORDS FROM SMF,  
// SORT, AND REFORMAT TO DPDACXXX AND DPDSTAT  
// DATASETS. OPTIONALLY EXTRACT 102 AUDIT  
// RECORDS, SORT AND REFORMAT TO DPDAUDIT  
//  
//STEP1 EXEC PGM=DPRDSMF,REGION=4096K  
//STEPLIB DD DISP=SHR,DSN=&HIDP..BBLINK  
//DPRLOG DD SYSOUT=*  SMF EXTRACT LOG  
//SYSOUT DD SYSOUT=*  SORT MESSAGES  
//SORTMSG DD SYSOUT=*  SORT MESSAGES  
//SYSUDUMP DD SYSOUT=*  
//DPDACC DD DSN=&RPTHI..DPDACCT, INTERIM ACCT FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//DPDSTOR DD DSN=&RPTHI..DPDSTOR, INTERIM STOR FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//DPDACPKG DD DSN=&RPTHI..DPDACPKG, INTERIM PKGACCT FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//DPDACDDF DD DSN=&RPTHI..DPDACDDF, INTERIM DDFACCT FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//DPDACBUF DD DSN=&RPTHI..DPDACBUF, INTERIM BUFACCT FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//DPDACACC DD DSN=&RPTHI..DPDACACC,  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//DPDSTAT DD DISP=(PASS),UNIT=&UNIT,SPACE=(CYL,(20,10),RLSE),  
//          DCB=BLKSIZE=27998  
//DPDAUDIT DD DISP=(PASS),UNIT=&UNIT,SPACE=(CYL,(200,100),RLSE),  
//           DCB=BLKSIZE=27998  
//SORTIN DD DISP=SHR,DSN=&SMF  
//SORTWK01 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK02 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK03 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK04 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK05 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK06 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//DPRCNTL DD DUMMY  CONTROL STATEMENTS  
//  
//STEP2 EXEC PGM=DPRSTAT,REGION=4096K  
//STEPLIB DD DISP=SHR,DSN=&HIDP..BBLINK  
//DPRLOG DD SYSOUT=*  
//SYSOUT DD SYSOUT=*  SORT MESSAGES  
//SORTMSG DD SYSOUT=*  SORT MESSAGES  
//SYSUDUMP DD SYSOUT=*  
//SORTIN DD DISP=(OLD,DELETE),DSN=*.STEP1.DPDSTAT  
//DPDSPIN DD DISP=OLD,DSN=&HIDP..SPIN  READ OLD SPIN DATA  
//DPDSTAT DD DSN=&RPTHI..DPDSTAT, INTERIM STATS FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(400,100),RLSE),DCB=BLKSIZE=27998  
//SORTWK01 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK02 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK03 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK04 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK05 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//SORTWK06 DD UNIT=&UNIT,SPACE=(CYL,(100,50))  
//DPRCNTL DD DUMMY  CONTROL STATEMENTS  
//  
//DPRSTAT IF RC < 8 THEN  
//  
//CHANGE STATS RECORDS FROM DB2 ACCUMULATED VALUES*  
//TO INTERVAL (DELTA) VALUES.  
//******************************************************************************  
//*****WARNING - THIS STEP MUST BE RUN FOR STATISTICS **********  
//*****WARNING - PROCESSING OR ELSE VERY LARGE NUMBERS**********  
//*****WARNING - IN STATISTICS REPORTS WILL OCCUR  **********  
//******************************************************************************  
//  
//STEP2 EXEC PGM=DPRSTAT,REGION=4096K  
//STEPLIB DD DISP=SHR,DSN=&HIDP..BBLINK  
//DPRLOG DD SYSOUT=*  
//SYSOUT DD SYSOUT=*  SORT MESSAGES  
//SORTMSG DD SYSOUT=*  SORT MESSAGES  
//SYSUDUMP DD SYSOUT=*  
//SORTIN DD DISP=(OLD,DELETE),DSN=*.STEP1.DPDSTAT  
//DPDSPIN DD DISP=OLD,DSN=&HIDP..SPIN  READ OLD SPIN DATA  
//DPDSTAT DD DSN=&RPTHI..DPDSTAT, INTERIM STATS FILE FOR LOAD/RPTS  
//     DISP=(&DSSTAT,PASS),UNIT=&RPTUNIT,  
//     SPACE=(CYL,(5,1),RLSE),DCB=BLKSIZE=27998  
//SORTWK01 DD UNIT=&UNIT,SPACE=(CYL,(2,2))  
//SORTWK02 DD UNIT=&UNIT,SPACE=(CYL,(2,2))
SORTWK03 DD UNIT=UNIT,SPACE=(CYL,(2,2))
/*
/DSUMLD IF RC < 8 THEN
/*
/* REPAIR EXEC PGM=&LOADPGM,REGION=4096K, DSNUTILB OR IEFBR14
/* PARM='&SYSTEM,&UID'
/* STEPLIB DD DSN=&HIDB2..SDSNLOAD,DISP=SHR
/* DD DSN=&HIDB2..SDSNEXIT,DISP=SHR
/* SYSPRINT DD SYSOUT=*   
/* UTPRINT DD SYSOUT=*   
/* /SYSUDUMP DD SYSOUT=* 
/* /SYST1 DD UNIT=UNIT,SPACE=(CYL,(5,2))
/*------------------------------------------------------------*
/*              BUILD DB2 LOAD CONTROL STATEMENTS,              *
/*              SUMMARIZE ACCOUNTING AND DDF ACCOUNTING RECORDS, *
/*              PURGE OLD RECORDS                             *
/*------------------------------------------------------------*
/*
/* STEP3 EXEC PGM=&SUMPGM,REGION=4096K DSNUMLD OR IEFBR14
/* STEPLIB DD DISP=SHR,DSN=&HIDB2..SDSNLOAD
/* DD DISP=SHR,DSN=&HIDB2..SDSNEXIT
/* DD DISP=SHR,DSN=&HIDP..BBLINK
/* DPSYSOUT DD SYSOUT=*   PROGRAM MESSAGES
/* SYSTOUT DD SYSOUT=*   SORT MESSAGE
/* SORTMSG DD SYSOUT=*   SORT MESSAGES
/* /SYSUDUMP DD SYSOUT=* 
/* /SORTWK01 DD UNIT=UNIT,SPACE=(CYL,(100,50))
/* /SORTWK02 DD UNIT=UNIT,SPACE=(CYL,(100,50))
/* /SORTWK03 DD UNIT=UNIT,SPACE=(CYL,(100,50))
/* /SORTWK04 DD UNIT=UNIT,SPACE=(CYL,(100,50))
/* /SORTWK05 DD UNIT=UNIT,SPACE=(CYL,(100,50))
/* /SORTWK06 DD UNIT=UNIT,SPACE=(CYL,(100,50))
/* /DPSSIN DD DUMMY CONTROL STATEMENTS
/* /UPLOAD DD UNIT=UNIT,DISP=(,PASS),SPACE=(TRK,(1,1),RLSE),
/* DBC=(RECFM=F8,RECL=80,BLKSIZE=3200)
/* /ACCTDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACCT
/* /ACPKGDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACPKG
/* /ACDDFDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACDDF
/* /ACBUFD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACBUF
/* /STATDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACSTAT
/* /ACCELDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACACC
/* /SUMMACCT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(600,300),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /SUMMACCS DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(600,300),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /SUMMSYMB DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(600,300),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /DDFSACCT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(10,2),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /PKGSACCT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(10,2),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /BUFFSACCT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(10,2),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /SUMMSTAT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(10,2),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /DDFSSTAT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(10,2),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/* /BUFFSSTAT DD UNIT=UNIT,DISP=(,PASS),SPACE=(CYL,(10,2),RLSE),
/* DBC=(RECL=2048,BLKSIZE=27998,RECFM=VB)
/*
/* DB2LOAD IF RC < 8 THEN
/*
/* LOAD INTO DB2 TABLES
/*
/* STEP4 EXEC PGM=&LOADPGM,REGION=4096K, DSNUTILB OR IEFBR14
/* PARM='&SYSTEM,&UID'
/* STEPLIB DD DSN=&HIDB2..SDSNLOAD,DISP=SHR
/* DD DSN=&HIDB2..SDSNEXIT,DISP=SHR
/* SYSPRINT DD SYSOUT=*   
/* UTPRINT DD SYSOUT=*   
/* /SORTMSG DD SYSOUT=*   SORT MESSAGES
/*
SYSUDUMP DD SYSOUT=* 
SORTOUT DD UNIT=*UNIT,SPACE=(CYL,(10,2)) 
SORTWK01 DD UNIT=*UNIT,SPACE=(CYL,(100,50)) 
SORTWK02 DD UNIT=*UNIT,SPACE=(CYL,(100,50)) 
SORTWK03 DD UNIT=*UNIT,SPACE=(CYL,(100,50)) 
SORTWK04 DD UNIT=*UNIT,SPACE=(CYL,(100,50)) 
SORTWK05 DD UNIT=*UNIT,SPACE=(CYL,(100,50)) 
SORTWK06 DD UNIT=*UNIT,SPACE=(CYL,(100,50)) 
SYSUT1 DD UNIT=*UNIT,SPACE=(CYL,(5,2)) 
SYSIN DD DISP=(OLD,DELETE),DSN=*.STEP3.DPLOAD 

ACCTDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACCT 
ACCELDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACACC 
ACPKGDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACPKG 
ACDDFDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDACDDF 
STATDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDSTAT 
STORDD DD DISP=(OLD,PASS),DSN=&RPTHI..DPDSTOR 
SUMMACKT DD DISP=(OLD,DELETE),DSN=*,STEP3.SUMMACCT 
DDFSACCT DD DISP=(OLD,DELETE),DSN=*,STEP3.DDFSACCT 
PKGSACCT DD DISP=(OLD,DELETE),DSN=*,STEP3.PKGSACCT 
BUFSACCT DD DISP=(OLD,DELETE),DSN=*,STEP3.BUFSACCT 
SUMMSTAT DD DISP=(OLD,DELETE),DSN=*,STEP3.SUMMSTAT 
DDFSSTAT DD DISP=(OLD,DELETE),DSN=*,STEP3.DDFSSTAT 
BUFSSTAT DD DISP=(OLD,DELETE),DSN=*,STEP3.BUFSSTAT 
SUMMACCS DD DISP=(OLD,DELETE),DSN=*,STEP3.SUMMACCS 
SUMMSYMB DD DISP=(OLD,DELETE),DSN=*,STEP3.SUMMSYMB 
AUDITDD DD DISP=(OLD,DELETE),DSN=*,STEP1.DPDAUDIT 

DB2LOAD ENDIF 
DPSUMLD ENDIF */ 

JS010 EXEC DPPSMF 
/STEP1.DPRCNTL DD * 
  TYPE=(ACCT,DDFACCT,PKGACCT,BUFACCT) 
  TYPE=(STAT,DDFSTAT,BUFSTAT) 
  TYPE2=(AUDSUM,AUDFAIL,AUDGRV,AUDDDL,AUDDML,AUDDMB,AUDCHG,AUDUTL) 
  TYPE3=(ASPCSTOR,SYSTSTOR,AUDDMOD,AUDATH,AUDTRC) 
  TYPE4=(ACCA,ACCS,SYMB) 
/* 
/* NOTE: SEE OVER-RIDE STEP: STEP1.DFSPARM DD */ 
/* THE ENTRY: MODS E15=(DPRSE15,0,,N) */ 
/* IS VALID FOR BOTH DFSORT AND SYNCSORT AND IT WILL */ 
/* LOAD THE DPRSE15 LOAD MODULE FROM EITHER STEPLIB, */ 
/* LINKLST, OR THE JOBLIB DD. */ 
/* */ 
/* STEP1.DFSPARM DD */ 
MODS E15=(DPRSE15,0,,N) OPTION VLSHRT 
/* 
/* REPAIR.SYSIN DD */ 
REPAIR OBJECT LOG NO 
  SET TABLESPACE DMRPROB1.DMRPRABA NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRACAA NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRACDNO NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADNO NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRA NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAU NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUB NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUBU NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUC NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUCU NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUF NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUFB NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUFBU NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUG NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUGU NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADARM NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAMU NOCOPYPEND 
  SET TABLESPACE DMRPROB1.DMRPRADRAUM NOCOPYPEND
DPRSMF job control statements
SET INDEX DMRPRDB1.SYDTRIDX NORBDPEND
SET INDEX DMRPRDB1.SYDTRIDX NORCVRPEND
SET INDEX DMRPRDB1.SYSMRIDX NORBDPEND
SET INDEX DMRPRDB1.SYSMRIDX NORCVRPEND
SET INDEX DMRPRDB1.SYS2RIDX NORBDPEND
SET INDEX DMRPRDB1.SYS2RIDX NORCVRPEND

//STEP3_DPSYSIN DD *
GLOBAL LOG=NO,SSID=DDDD,INVFIELD=IGNORE,PLAN=DPSUMLD ** UPDATE
LOAD TYPE=STAT,TABLE=DMRPR.DMRSTAT,FROMDD=STATDD
LOAD TYPE=DDFSTAT,TABLE=DMRPR.DMRSTDF,FROMDD=STATDD
LOAD TYPE=BUFSTAT,TABLE=DMRPR.DMRSBFDT,FROMDD=STATDD
PURGE TYPE=STAT,TABLE=DMRPR.DMRSTAT,RETPD=10D
PURGE TYPE=DDFSTAT,TABLE=DMRPR.DMRSTDF,RETPD=10D
PURGE TYPE=BUFSTAT,TABLE=DMRPR.DMRSBFDT,RETPD=10D

*-------------------------------------------------------------------*
*         --- LOAD SUMMARY STATISTICS TABLE (60-MINUTE INTERVAL) ---*
*         --- PURGE DATA THAT IS OLDER THAN 10 DAYS ---
* SUMMARIZE TYPE=SUMSTAT,FROMDD=STATDD,
* TABLE=DMRPR.DMRSTSUM,
* TODD=SUMMSTAT,
* SUMMSTART=*_1,
* SUMMEND=*,
* SUMMINT=60M,
* SUMMMKEY=(SUBSYSTEM,SYSTEMID,LOCATION)
LOAD TYPE=SUMSTAT,TABLE=DMRPR.DMRSTSUM,FROMDD=SUMMSTAT
PURGE TYPE=SUMSTAT,TABLE=DMRPR.DMRSTSUM,RETPD=10D

*-------------------------------------------------------------------*
*             THE FOLLOWING STATEMENTS ARE COMMENTED TO AVOID       *
*             THE OVERHEAD OF LOADING THE DETAIL ACCOUNTING TABLES. *
*             REMOVE THE COMMENTS IF THE DETAIL ACCOUNTING TABLES   *
*             ARE DESIRED.                                          *
*  LOAD   TYPE=ACCT,TABLE=DMRPR.DMRACDTL,FROMDD=ACCTDD              *
*  LOAD   TYPE=DDFACCT,TABLE=DMRPR.DMRADDTL,FROMDD=ACDDFDD          *
*  LOAD   TYPE=PKGACCT,TABLE=DMRPR.DMRAPDTL,FROMDD=ACPKGDD          *
*  LOAD   TYPE=BUFACCT,TABLE=DMRPR.DMRABDTL,FROMDD=ACBUFDD          *
*  PURGE  TYPE=ACCT,TABLE=DMRPR.DMRACDTL,RETPD=10D                  *
*  PURGE  TYPE=DDFACCT,TABLE=DMRPR.DMRADDTL,RETPD=10D               *
*  PURGE  TYPE=PKGACCT,TABLE=DMRPR.DMRAPDTL,RETPD=10D               *
*  PURGE  TYPE=BUFACCT,TABLE=DMRPR.DMRABDTL,RETPD=10D               *
*-------------------------------------------------------------------*
*             --- LOAD SUMMARY ACCOUNTING TABLE (30-MINUTE INTERVAL) ---*
*             --- PURGE DATA THAT IS OLDER THAN 10 DAYS ---
* SUMMARIZE TYPE=SUMACCT,FROMDD=ACCTDD,
TABLE=DMRPR.DMRACSUM,
TODD=SUMMACCT,
SUMMSTART=*_1,
SUMMEND=*,
SUMMINT=30M,
SUMMKEY=(LOCATION, SUBSYSTEM, PLANNAME, AUTHID)
* OTHER POSSIBLE SUMMARY KEY VALUES ARE CONNECTION, CORRID
* ORIGPRIMID, LUWIDNID.

LOAD TYPE=SUMMACCT, TABLE=DMRPR.DMRACSUM, FROMDD=SUMMACCT
PURGE TYPE=SUMMACCT, TABLE=DMRPR.DMRACSUM, RETPD=10D
* --- LOAD SUMMARY DDF ACCOUNTING TABLE (30-MINUTE INTERVAL)-
* --- PURGE DATA THAT IS OLDER THAN 10 DAYS --- *

SUMMARIZE TYPE=SUMDDFACCT, FROMDD=ACDDFDD,
TABLE=DMRPR.DMRADSUM,
SUMMSTART=*_1,
SUMMEND=*,
SUMMINT=30M,
TODD=DDFSACCT,
SUMMKEY=(LOCATION, SUBSYSTEM, PLANNAME, AUTHID, DDFLOCATION)
* OTHER POSSIBLE SUMMARY KEY VALUES ARE CONNECTION, CORRID
* ORIGPRIMID, LUWIDNID.

LOAD TYPE=SUMDDFACCT, TABLE=DMRPR.DMRADSUM, FROMDD=DDFSACCT
PURGE TYPE=SUMDDFACCT, TABLE=DMRPR.DMRADSUM, RETPD=10D
* --- LOAD SUMMARY PKG ACCOUNTING TABLE (30-MINUTE INTERVAL)-
* --- PURGE DATA THAT IS OLDER THAN 10 DAYS --- *

SUMMARIZE TYPE=SUMPKGACCT, FROMDD=ACPKGDD,
TABLE=DMRPR.DMRAPSUM,
SUMMSTART=*_1,
SUMMEND=*,
SUMMINT=30M,
TODD=PKGSACCT,
SUMMKEY=(LOCATION, SUBSYSTEM, PLANNAME, AUTHID, PROGRAMNAME)
* OTHER POSSIBLE SUMMARY KEY VALUES ARE CONNECTION, CORRID
* ORIGPRIMID, COLLECTIONID.

LOAD TYPE=SUMPKGACCT, TABLE=DMRPR.DMRAPSUM, FROMDD=PKGSACCT
PURGE TYPE=SUMPKGACCT, TABLE=DMRPR.DMRAPSUM, RETPD=10D
* --- LOAD SUMMARY BUF ACCOUNTING TABLE (30-MINUTE INTERVAL)-
* --- PURGE DATA THAT IS OLDER THAN 10 DAYS --- *

SUMMARIZE TYPE=SUMBUFACCT, FROMDD=ACBUFDD,
TABLE=DMRPR.DMRABSUM,
SUMMSTART=*_1,
SUMMEND=*,
SUMMINT=30M,
TODD=BUFSACCT,
SUMMKEY=(LOCATION, SUBSYSTEM, PLANNAME, AUTHID, BPNAME)
* OTHER POSSIBLE SUMMARY KEY VALUES ARE CONNECTION, CORRID
* ORIGPRIMID

LOAD TYPE=SUMBUFACCT, TABLE=DMRPR.DMRABSUM, FROMDD=BUFSACCT
PURGE TYPE=SUMBUFACCT, TABLE=DMRPR.DMRABSUM, RETPD=10D
* --- THE FOLLOWING STATEMENTS WILL LOAD AUDIT TABLES. --- *

LOAD TYPE2=AUDSUM, TABLE=DMRPR.DMRAUSUM, FROMDD=AUDITDD
LOAD TYPE2=AUDFAIL, TABLE=DMRPR.DMRAFAL, FROMDD=AUDITDD
LOAD TYPE2=AUDGRV, TABLE=DMRPR.DMRAGRV, FROMDD=AUDITDD
LOAD TYPE2=AUDDDL, TABLE=DMRPR.DMRAUDDL, FROMDD=AUDITDD
LOAD TYPE2=AUDDML, TABLE=DMRPR.DMRAUDML, FROMDD=AUDITDD
LOAD TYPE2=AUDDMB, TABLE=DMRPR.DMRAUDMB, FROMDD=AUDITDD
LOAD TYPE2=AUDDCHG, TABLE=DMRPR.DMRAUDCHG, FROMDD=AUDITDD
LOAD TYPE2=AUDDU, TABLE=DMRPR.DMRAUDU, FROMDD=AUDITDD
LOAD TYPE2=AUDDCM, TABLE=DMRPR.DMRAUDCM, FROMDD=AUDITDD
LOAD TYPE3=AUDTRC, TABLE=DMRPR.DMRAUTRC, FROMDD=AUDITDD
DPSUMLD control statements

The DPSUMLD program is used in the DPRSMF job when loading data into tables from SMF and in the DPRSUM job when processing data already in the tables.

The usage and meaning of some of the keywords and operands are slightly different in the two environments. For example, of the table types defined in the TYPE keyword, the detail tables (ACCT, STAT, BUFFER, DDFACCT, DDFSTAT) can only
be loaded from SMF data in the DPRSMF job, while the summary tables (SUMACCT and SUMDDFACCT) can be summarized and loaded in both—From SMF data in DPRSMF, or from another detail or summary table in DPRSUM.

EXEC PARMs for NGT Load and BMC LOADPLUS

Specify the appropriate EXEC PARM depending on which method you are using to load the DB2 tables:

- BMC NGT Load method
  PARM=NGTLOAD is required to generate the BMC NGT Load syntax.

  Example
  
  ```
  //STEP3 EXEC PGM=DPSUMLD,REGION=32M,PARM=NGTLOAD
  ```

- BMC LOADPLUS method
  PARM=LOADPLUS is required to generate the BMC LOADPLUS LOAD syntax.

  Example
  
  ```
  //STEP3 EXEC PGM=DPSUMLD,REGION=32M,PARM=LOADPLUS
  ```

Control statement overview

This section provides an overview of the control statements used by the DPSUMLD program.

Table 30 on page 125 lists the control statements for the DPSUMLD program.

Table 30: Control statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
</table>
| GLOBAL    | Global defaults  
One is required as the first statement.  
For more information, see “GLOBAL Operands” on page 126. |
| LOAD      | Load input data in a temporary file to a table  
Specify one per output table. In the DPRSMF job, this statement is used to load processed SMF input data from a temporary file to a detail output table, or after a SUMMARIZE statement to load summarized SMF input data from a work file to an output summary table. In the DPRSUM job, this statement is used after a SUMMARIZE statement to load summarized data from a work file to an output summary table.  
For more information, see “LOAD” on page 127. |
### Statement Description

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
</table>
| SUMMARIZE | Summarize input data to a work file  
This statement must be followed by a LOAD statement. Specify one per summary output table (valid only for accounting tables). In the DPRSMF job, this statement is used to summarize SMF input data. In the DPRSUM job, this statement is used to summarize data in a table. The input table may be either a detail table or a summary table that is to be even further summarized.  
For more information, see “SUMMARIZE” on page 129. |
| PURGE     | Purge data that is older than the specified datetime from a table  
Specify one statement per table where purging is required. In the DPRSMF job, this statement is used to purge table data daily; for example, deleting the data of the oldest day in the table while loading the data from the previous work day. In the DPRSUM job, this statement is used to purge table data less frequently, during a summarization job cycle that may be run only weekly or monthly.  
For more information, see “PURGE” on page 137. |
| UNLOAD    | Unload data from a table to a data set  
This statement can be used for table migration; for example, to unload data from a table where all possible columns are defined to a smaller table with only a subset of columns. BBSAMP member, DPJMIGR, also uses UNLOAD in migrating from one MVDB2 release to the next.  
For more information, see “UNLOAD” on page 139. |

### Control statement detail definitions

The operands for each control statement is listed in this section.

**GLOBAL Operands**

This control statement defines the global defaults for the DPSUMLD program.

One GLOBAL control statement is required as the first statement. **Table 31 on page 126** describes the operands for the GLOBAL control statement.

#### Table 31: GLOBAL control statement operands

<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISCARDS</td>
<td>Sets the DISCARDS limit</td>
</tr>
<tr>
<td></td>
<td>The default is 0.</td>
</tr>
<tr>
<td>(for the BMC LOADPLUS method only)</td>
<td></td>
</tr>
</tbody>
</table>

<p>| ENUMROWSNEW             | Estimated number of new rows inserted into the table |
| (for the BMC LOADPLUS method only) |                           |</p>
<table>
<thead>
<tr>
<th><strong>Operand</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENUMROWSTOTAL</td>
<td>Estimated number of total rows in the table after processing</td>
</tr>
<tr>
<td>(for the BMC LOADPLUS method only)</td>
<td></td>
</tr>
</tbody>
</table>
| INVFIELD=IGNORE | ABORT                | Defines if processing should continue if an invalid field in the DB2 table is encountered  
The default is ABORT, which indicates that the processing for the request should abort. |
| LOG=YES | NO                   | Defines the default logging control for all load requests that follow  
The default is NO. This statement can occur multiple times. It resets the default value for all statements that follow. |
| NOCOPYPEND=YES | NO                   | Indicates whether NOCOPYPEND is specified for all subsequent LOAD requests, if LOG=NO is specified or is in effect from a prior GLOBAL statement  
The default is NO, which means that the NOCOPYPEND keyword will not be added to the generated statement if LOG=NO is in effect. This statement can occur multiple times. It resets the value for all statements that follow. |
| PLAN=name of the plan                | Name of the plan for the load interface routine  
This operand is provided in the case where you want to change the default name of the plan. If not provided, the default plan as defined in the installation instructions is used. |
| SSID=ssid of target DB2 system      | Subsystem name of the DB2 system which owns the tables to be loaded, summarized or purged  
This statement can occur multiple times. It resets the default value for all statements that follow. This required field has no default. |
| SHRLEVEL=NONE | CHANGE               | Defines the SHRLEVEL parameter for all of the load requests that follow  
The default is NONE. This statement can be specified multiple times. It resets the default value for all statements that follow. |

**LOAD**

This control statement requests that the defined input be loaded to the defined output table by the DB2 LOAD utility.

Table 32 on page 128 describes the operands for the LOAD control statement.
## Table 32: LOAD control statement operands

<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
</table>
| **TYPE=accountingStatisticsTableType** | Specifies the type of accounting or statistics table. Possible values are:  
  - ACCT  
  - SUMACCT  
  - DDFACCT  
  - SUMDDFACCT  
  - PKGACCT  
  - SUMPKGACCT  
  - BUFACCT  
  - SUMBUFACCT  
  - STAT  
  - SUMMSTAT  
  - DDFSTAT  
  - SUMDDFSTAT  
  - BUFSTAT  
  - SUMBUFSTAT  
  This required field has no default. |
| **TYPE2=auditTableType** | Specifies the type of audit table. Possible values are:  
  - AUDFAIL  
  - AUDGRV  
  - AUDDDL  
  - AUDDML  
  - AUDDMB  
  - AUDCHG  
  - AUDUTL  
  - AUDSUM  
  This required field has no default. |
| **TYPE3=statisticsAuditTableType** | Specifies the type of statistics or audit table. Possible values are:  
  - ASPCSTOR  
  - SYSTSTOR  
  - AUDCMD  
  - AUDATH  
  - AUDTRC  
  This required field has no default. |
<table>
<thead>
<tr>
<th><strong>Operand</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
</table>
| **TYPE4=acceleratorSimBPTableType** | Specifies the type of accelerator table or simulated bufferpool table. Possible values are: ▶ ACCA ▶ ACCS ▶ SYMB 
This required field has no default. |
| **TABLE=tableName** | Specifies name of the receiving table. This table is read to define the columns defined within the table. |
| **LOG=YES | NO** | Defines the LOG parameter for the load of this table. If not defined, the default is defined by the GLOBAL LOG value. |
| **NOCOPYPEND=YES | NO** | Defines NOCOPYPEND for the load of this table if LOG=NO is specified. If not defined, the default is defined by a prior GLOBAL NOCOPYPEND value. |
| **FROMDD=ddName** | Indicates the ddname assigned to the file that is to be loaded. This required field has no default. |
| **REPLACE=YES | NO** | Specifies whether the table space and all its indexes need to be reset to empty before records are loaded. The default is NO; however, if KEEPDICTIONARY=YES is specified, REPLACE=YES becomes the default. |
| **KEEPDICTIONARY=YES | NO** | Specifies whether a new compression dictionary is built. YES prevents the LOAD utility from building a new compression dictionary. LOAD retains the current compression dictionary and uses it for compressing the input data. This option eliminates the cost associated with building a new dictionary. The default is NO. 

**Note:** This keyword is valid only if a compression dictionary exists and the table space being loaded has the COMPRESS YES attribute. |
| **SORTKEYS=nnnnn** | Specifies an estimated number of index keys to be sorted in parallel with the reload and build phases to improve performance. The default is 0. |
| **SHRLEVEL=NONE | CHANGE** | Defines the SHRLEVEL parameter for the load of this table. SHRLEVEL=CHANGE allows access to a table during the load process, which increases log and archive processing overhead. An appropriate LOCKSIZE specification is required for the table space. SHRLEVEL=CHANGE increases overhead by changing the LOAD process to use a mass INSERT algorithm, and LOG=YES must be specified. |

**SUMMARIZE**

The SUMMARIZE control statement requests that the input values be summarized according to the included specifications.
The following table describes the operands for the SUMMARIZE control statement.

### Table 33: SUMMARIZE control statement operands

<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
</table>
| **TYPE=\(tableType\)** | Specifies the type of the receiving table  
Possible values are:  
- SUMACCT  
- SUMDDFACCT  
- SUMPKGACCT  
- SUMBUFACCT  
- SUMMSTAT  
- SUMDDFSTAT  
- SUMBUFSTAT  
This required field has no default. |
| **TYPE4=\(acceleratorSimBPTableType\)** | Specifies the type of accelerator table or simulated bufferpool table  
Possible values are:  
- SUMACCA  
- SUMACCSS  
- SUMSYMNB  
This required field has no default. |
| **TABLE=\(tableName\)** | Name of the receiving table  
This table is read to define the columns defined within the table. It can be loaded by a specifically requested LOAD request. This field is optional. If it is not specified, no source of default summarization columns exists, and SUMMKEY is the only other possible source. |
| **FROMTBL=\(tableName\)** | Name of the table from which records are to be read and summarized  
This operand is mutually exclusive with FROMDD. |
| **FROMDD=\(ddName\)** | Ddname assigned to the file that is to be loaded.  
This operand is mutually exclusive with FROMTBL |
| **TODD=\(ddName\)** | Ddname receiving the file of summarized records  
This operand is used as a work file for the specified LOAD request.  
This required field has no default. |
<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
</table>
| COMBINE=(fld1,fld2,fld3,...) | Defines a list of column names from the input table that are to be combined in the output table. The values from all fields are added together and passed on in the first field. There is no default. The default is to ignore combine processing. It is possible to type multiple COMBINE statements in a single summarization process. Only columns with like attributes can be combined. It is possible to combine integer and short integer columns. Character columns cannot be combined, nor can datetime columns. If overflow occurs while combining fields, the largest possible positive value is placed in the field.  
**Note:** All COMBINE statements for a summarization process have a limit of 200 field names.  
**Note:** This keyword is deprecated and will be removed in a future release of MainView for DB2.  |
| SUMMSTART=date-time | Defines the first record which participates in summarization  
- **Format for date:**  
  - yyyy-mm-dd (For a specific date)  
  - * (For the current date)  
  - *_{nn} (For a previous date \( mn \) days before the current date)  
  - *_{l} (For the beginning of the previous day)  
- **Format for time is hh:mm:ss for a specific time.**  
If this operand is omitted, the default is to start with the oldest record from the specified input source.  
**Note:** For ease in reading the resulting reports, it is preferable to specify a start time on an even time period, such as an hour. |
<table>
<thead>
<tr>
<th><strong>Operand</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
</table>
| SUMMEND=\textit{date-time} | Defines the last record which participates in summarization  
\textbf{Format for date:}  
\begin{itemize}  
    \item yyyy-mm-dd (Up to (but not including) the specified date)  
    \item * (Up to (but not including) the current date)  
    \item *_nn (Up to (but not including) a previous date \textit{nn} days before the current date)  
\end{itemize}  
\textbf{Format for time} is hh:mm:ss to specify up to (but not including) the specified time. If omitted, the default is to process all records after the first one selected. |
| SUMMINT=\textit{nnnX} | Indicates the number of minutes (M), hours (H), days (D), weeks (W), or months (N or MON) to be included in each summary interval (row)  
\textbf{The} \textit{X} \textbf{can be entered as} M, H, D, W, N, or MON. The default value is 30M.  
Each interval generated starts at microsecond 0 and ends at microsecond 999999; for example, if SUMMINT=15M, a generated interval will be 14:45:00.000000 to 14:59:59.999999; then the next interval will be 15:00:00.000000 to 15:14:59.999999. The end interval time is reflected in the DATETIME, TIME and HOUR columns of the Performance Reporter tables. |
<table>
<thead>
<tr>
<th><strong>Operand</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMKEY=(key, key,...)</td>
<td>Defines which columns are to be used as keys, so that their values remain unique in the summarized records Possible values are:</td>
</tr>
<tr>
<td></td>
<td>- AUTHID</td>
</tr>
<tr>
<td></td>
<td>- BPNAME</td>
</tr>
<tr>
<td></td>
<td>- COLLECTIONID</td>
</tr>
<tr>
<td></td>
<td>- CONNECTION</td>
</tr>
<tr>
<td></td>
<td>- CONSISTOKEN</td>
</tr>
<tr>
<td></td>
<td>- CORRID</td>
</tr>
<tr>
<td></td>
<td>- CORRNAME</td>
</tr>
<tr>
<td></td>
<td>- DDFLOCATION</td>
</tr>
<tr>
<td></td>
<td>- ENDUSERID</td>
</tr>
<tr>
<td></td>
<td>- ENDUSERTX</td>
</tr>
<tr>
<td></td>
<td>- ENDUSERWN</td>
</tr>
<tr>
<td></td>
<td>- EXECLOCATION</td>
</tr>
<tr>
<td></td>
<td>- LOCATION</td>
</tr>
<tr>
<td></td>
<td>- LUWIDLUNM</td>
</tr>
<tr>
<td></td>
<td>- LUWIDNID</td>
</tr>
<tr>
<td></td>
<td>- ORIGPRIMID</td>
</tr>
<tr>
<td></td>
<td>- PLANNAME</td>
</tr>
<tr>
<td></td>
<td>- PROGRAMNAME</td>
</tr>
<tr>
<td></td>
<td>- REQLOCATION</td>
</tr>
<tr>
<td></td>
<td>- REQLOCATION</td>
</tr>
<tr>
<td></td>
<td>- SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>- SYSTEMID</td>
</tr>
</tbody>
</table>
Operand | Description
--- | ---
SUMMKEY=(key,key,...) (continued) | Any combination of these values can be entered separated by commas. All values entered must be defined in the receiving table, if the receiving table is named. The SUMMKEY or TABLE keyword (or both) must be defined in a SUMMARIZE statement. The limitations are described in Table 34 on page 134.
SUMMKEY columns that are not specified will be set to blanks in the summarized record to avoid storing erroneous or misleading information in the record. The blanks indicate that the column's value in the record is immaterial, because the summarized record might be produced from multiple records that have different values in that field.

**Note:** Although CONTYPE is not a summkey, it is added to the final summarization output. When different CONTYPEs are encountered during a summarization interval, the word MULTIPLE will be recorded in the resulting summarized output. Otherwise the actual value for CONTYPE is used.

The following table describes the valid key values for the SUMMKEY and the TABLE keywords for each type of receiving table.

**Table 34: SUMMKEY and TABLE keyword values**

<table>
<thead>
<tr>
<th>Table</th>
<th>Keyword</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMACCT</td>
<td>■ AUTHID</td>
</tr>
<tr>
<td></td>
<td>■ CONNECTION</td>
</tr>
<tr>
<td></td>
<td>■ CORRID</td>
</tr>
<tr>
<td></td>
<td>■ CORRNAME</td>
</tr>
<tr>
<td></td>
<td>■ ENDUSERID</td>
</tr>
<tr>
<td></td>
<td>■ ENDUSERTX</td>
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<tr>
<td></td>
<td>■ ENDUSERWN</td>
</tr>
<tr>
<td></td>
<td>■ LOCATION</td>
</tr>
<tr>
<td></td>
<td>■ LUWIDLUNM</td>
</tr>
<tr>
<td></td>
<td>■ LUWIDNID</td>
</tr>
<tr>
<td></td>
<td>■ ORIGPRIMID</td>
</tr>
<tr>
<td></td>
<td>■ PLANNANME</td>
</tr>
<tr>
<td></td>
<td>■ SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>■ SYSTEMID</td>
</tr>
<tr>
<td>Table</td>
<td>Keyword</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>SUMDDFACCT</td>
<td>■ AUTHID</td>
</tr>
<tr>
<td></td>
<td>■ CONNECTION</td>
</tr>
<tr>
<td></td>
<td>■ CORRID</td>
</tr>
<tr>
<td></td>
<td>■ CORRNAME</td>
</tr>
<tr>
<td></td>
<td>■ DDFLOCATION</td>
</tr>
<tr>
<td></td>
<td>■ ENDUSERID</td>
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<tr>
<td></td>
<td>■ ENDUSERTX</td>
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<tr>
<td></td>
<td>■ ENDUSERWN</td>
</tr>
<tr>
<td></td>
<td>■ LOCATION</td>
</tr>
<tr>
<td></td>
<td>■ LUWIDLUNM</td>
</tr>
<tr>
<td></td>
<td>■ LUWIDNID</td>
</tr>
<tr>
<td></td>
<td>■ ORIGPRIMID</td>
</tr>
<tr>
<td></td>
<td>■ PLANNANME</td>
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<tr>
<td></td>
<td>■ REQLOCATION</td>
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<tr>
<td></td>
<td>■ SUBSYSTEM</td>
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<tr>
<td></td>
<td>■ SYSTEMID</td>
</tr>
<tr>
<td>SUMPKGACCT</td>
<td>■ AUTHID</td>
</tr>
<tr>
<td></td>
<td>■ COLLECTIONID</td>
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<tr>
<td></td>
<td>■ CONNECTION</td>
</tr>
<tr>
<td></td>
<td>■ CONSISTOKEN</td>
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<td></td>
<td>■ CORRID</td>
</tr>
<tr>
<td></td>
<td>■ CORRNAME</td>
</tr>
<tr>
<td></td>
<td>■ ENDUSERID</td>
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<tr>
<td></td>
<td>■ ENDUSERTX</td>
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<tr>
<td></td>
<td>■ ENDUSERWN</td>
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<td></td>
<td>■ EXECLOCATION</td>
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<td></td>
<td>■ LOCATION</td>
</tr>
<tr>
<td></td>
<td>■ LUWIDLUNM</td>
</tr>
<tr>
<td></td>
<td>■ LUWIDNID</td>
</tr>
<tr>
<td></td>
<td>■ ORIGPRIMID</td>
</tr>
<tr>
<td></td>
<td>■ PLANNANME</td>
</tr>
<tr>
<td></td>
<td>■ PROGRAMNAME</td>
</tr>
<tr>
<td></td>
<td>■ SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>■ SYSTEMID</td>
</tr>
<tr>
<td>Table</td>
<td>Keyword</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>SUMBUFACCT</td>
<td>• AUTHID</td>
</tr>
<tr>
<td></td>
<td>• BPNAME</td>
</tr>
<tr>
<td></td>
<td>• CONNECTION</td>
</tr>
<tr>
<td></td>
<td>• CORRID</td>
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<td></td>
<td>• CORRNAME</td>
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<td></td>
<td>• ENDUSERID</td>
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<td>• ENDUSERWN</td>
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<td>• LOCATION</td>
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<td></td>
<td>• LUWIDLUNM</td>
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<tr>
<td></td>
<td>• LUWIDNID</td>
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<tr>
<td></td>
<td>• ORIGPRIMID</td>
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<tr>
<td></td>
<td>• PLANNANME</td>
</tr>
<tr>
<td></td>
<td>• SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>• SYSTEMID</td>
</tr>
<tr>
<td>SUMSTAT</td>
<td>• LOCATION</td>
</tr>
<tr>
<td></td>
<td>• SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>• SYSTEMID</td>
</tr>
<tr>
<td>SUMDDFSTAT</td>
<td>• DDFLOCATION</td>
</tr>
<tr>
<td></td>
<td>• LOCATION</td>
</tr>
<tr>
<td></td>
<td>• SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>• SYSTEMID</td>
</tr>
<tr>
<td>SUMBUFSTAT</td>
<td>• AUTHID</td>
</tr>
<tr>
<td></td>
<td>• LOCATION</td>
</tr>
<tr>
<td></td>
<td>• SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>• SYSTEMID</td>
</tr>
<tr>
<td>SUMACCA</td>
<td>• SUBSYSTEM</td>
</tr>
<tr>
<td></td>
<td>• PLANNNAME</td>
</tr>
<tr>
<td></td>
<td>• AUTHID</td>
</tr>
<tr>
<td></td>
<td>• CONNECTION</td>
</tr>
<tr>
<td></td>
<td>• CORRID</td>
</tr>
<tr>
<td></td>
<td>• ORIGPRIMID</td>
</tr>
<tr>
<td></td>
<td>• LUWIDNID</td>
</tr>
<tr>
<td></td>
<td>• LUWIDLUNM</td>
</tr>
<tr>
<td></td>
<td>• LOCATION</td>
</tr>
</tbody>
</table>
The default is to use all key columns that are defined and valid in the receiving table.

**PURGE**

The PURGE control statement requests that the specified table be purged of all data with a datetime older than the specified value.

Table 35 on page 137 describes the operands for the PURGE control statement.

### Table 35: PURGE control statement operands

<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE=tableType</td>
<td>Specifies the type of table</td>
</tr>
<tr>
<td></td>
<td>Possible values are:</td>
</tr>
<tr>
<td></td>
<td>■ ACCT</td>
</tr>
<tr>
<td></td>
<td>■ SUMACCT</td>
</tr>
<tr>
<td></td>
<td>■ DDFACCT</td>
</tr>
<tr>
<td></td>
<td>■ SUMDDFACCT</td>
</tr>
<tr>
<td></td>
<td>■ PKGACCT</td>
</tr>
<tr>
<td></td>
<td>■ SUMPKGACCT</td>
</tr>
<tr>
<td></td>
<td>■ BUFACCT</td>
</tr>
<tr>
<td></td>
<td>■ SUMBUFACCT</td>
</tr>
<tr>
<td></td>
<td>■ STAT</td>
</tr>
<tr>
<td></td>
<td>■ SUMMSTAT</td>
</tr>
<tr>
<td></td>
<td>■ DDFSTAT</td>
</tr>
<tr>
<td></td>
<td>■ SUMDDFSTAT</td>
</tr>
<tr>
<td></td>
<td>■ BUFSTAT</td>
</tr>
<tr>
<td></td>
<td>■ SUMBUFSTAT</td>
</tr>
</tbody>
</table>

This field is included only for compatibility with other control statements. In the present release it is for documentation only.
<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
</table>
| TYPE2=auditTableType        | Specifies the type of statistics or audit table Possible values are:  
  - AUDFAIL  
  - AUDGRV  
  - AUDDDL  
  - AUDDML  
  - AUDDMB  
  - AUDCHG  
  - AUDUTL  
  - AUDSUM  
  This required field has no default. |
| TYPE3=statisticsTableType   | Specifies the type of statistics table Possible values are:  
  - ASPCSTOR  
  - SYSTSTOR  
  This required field has no default. |
| TYPE4=acceleratorSimBPTableType | Specifies the type of accelerator table or simulated bufferpool table Possible values are:  
  - ACCA  
  - ACCS  
  - SYMB  
  This required field has no default. |
| TABLE=tableName             | Name of the table to be processed This required field has no default.                                                                                                                                         |
| EXPDT=yyyy-mm-dd-hh:mm:ss    | Timedate of the oldest entry that is to be kept All older entries are deleted. This operand is mutually exclusive with RETPD.                                                                                     |
| RETPD=nnnD                  | Interval describing the oldest entry that is to be kept Any entry older than today minus nnn days is deleted. This operand is mutually exclusive with EXPDT. RETPD=0D deletes all rows in the selected table. |
| COMMIT=number|0       | The number of records to be deleted before a COMMIT is issued COMMIT can be used to reduce lock contention during PURGE processing, however, PURGE processing will run longer, and might encounter lock contentions that further delay processing.  
  The default value of 0 indicates that the COMMIT will be performed after the delete is done. This increases the length of time a lock is held, but is generally more efficient. |
UNLOAD

The UNLOAD control statement requests that all the rows from the DB2 table are to be written to a variable block sequential data set.

Table 36 on page 139 describes the operands for the UNLOAD control statement.

Table 36: UNLOAD control statement operands

<table>
<thead>
<tr>
<th>Operand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE=accountingStatisticsTableType</td>
<td>Specifies the type of accounting or statistics table Possible values are:</td>
</tr>
<tr>
<td></td>
<td>▪ ACCT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMACCT</td>
</tr>
<tr>
<td></td>
<td>▪ DDFACCT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMDDFACCT</td>
</tr>
<tr>
<td></td>
<td>▪ PKGACCT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMPKGACCT</td>
</tr>
<tr>
<td></td>
<td>▪ BUFACCT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMBUFACCT</td>
</tr>
<tr>
<td></td>
<td>▪ STAT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMMSTAT</td>
</tr>
<tr>
<td></td>
<td>▪ DDFSTAT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMDDFSTAT</td>
</tr>
<tr>
<td></td>
<td>▪ BUFSTAT</td>
</tr>
<tr>
<td></td>
<td>▪ SUMBUFSTAT</td>
</tr>
<tr>
<td></td>
<td>This required field has no default.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE2=auditTableType</th>
<th>Specifies the type of audit table Possible values are:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▪ AUDFAIL</td>
</tr>
<tr>
<td></td>
<td>▪ AUDGRV</td>
</tr>
<tr>
<td></td>
<td>▪ AUDDDL</td>
</tr>
<tr>
<td></td>
<td>▪ AUDDML</td>
</tr>
<tr>
<td></td>
<td>▪ AUDDMB</td>
</tr>
<tr>
<td></td>
<td>▪ AUDCHG</td>
</tr>
<tr>
<td></td>
<td>▪ AUDUTL</td>
</tr>
<tr>
<td></td>
<td>▪ AUDSUM</td>
</tr>
<tr>
<td></td>
<td>This required field has no default.</td>
</tr>
<tr>
<td>Operand</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| TYPE3=statisticsAuditTableType | Specifies the type of statistics or audit table  
Possible values are:  
■ ASPCSTOR  
■ SYSTSTOR  
■ AUDCMD  
■ AUDATH  
■ AUDTRC  
This required field has no default. |
| TYPE4=acceleratorSimBPTableType | Specifies the type of accelerator or simulated bufferpool table  
Possible values are:  
■ ACCA  
■ ACCS  
■ SYMB  
This required field has no default. |
| FROMTBL=tableName | Name of the table from which the rows are fetched  
This required field has no default. |
| TODD=ddName | ddName assigned to the file to which the rows are written  
This required field has no default. |
| UNLDSTART=yyyy-mm-dd,UNLDEND=yyyy-mm-dd | Limits the records that are unloaded.  
For example, UNLDSTART=2002-01-08,UNLDEND=2002-01-09 limits the records unloaded to those for the day of 2002-01-08. |

**Example of control statements**

This section shows an example of the control statements showing proper syntax and structure for a single step.

*Figure 27: Control statements example*

```
GLOBAL    LOG=NO,SSID=PROD,PLAN=DZNEWPL
*
*   --------- Detail Accounting  ---------
LOAD      TYPE=ACCT, TABLE=DMRPR.ACCT1,
          FROMDD=DDACCT
*
*   --------- Statistics ----------------
LOAD      TYPE=STAT, TABLE=DMRPR.STAT1, LOG=YES,
          FROMDD=DDSTAT
*
*   --------- DDF Accounting Summary, 2 hour intervals  ---------
SUMMARIZE TYPE=SUMDDFACCT, TABLE=DMRPR.DDFSAC1,
          FROMDD=DDFACCT,TODD=WKDD1,
          SUMMSTART=1993-09-14-02:00:00,
          SUMMEND=1993-09-15-12:00:00,
          SUMMINT=2H,
          SUMMKEY=(LOCATION,SUBSYSTEM,PLANNAME,AUTHID,DDFLOCATION)
```
DPRSMF return codes and error messages

The DPRSMF job issues informational, warning, and error messages about the data extraction process.

Messages are documented in the BMC Documentation Center, which is available on the BMC Support Central site (http://www.bmc.com/support).

The DPRDSMF program produces the following return codes:

<table>
<thead>
<tr>
<th>Return code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>4</td>
<td>Warning issued</td>
</tr>
<tr>
<td>8</td>
<td>At least one major function was not completed</td>
</tr>
<tr>
<td>12</td>
<td>Catastrophic, no functions completed</td>
</tr>
</tbody>
</table>

DPSUMLD return codes and error messages

This section describes the return codes and messages produced by the DPSUMLD program.

Additional messages are documented in the BMC Documentation Center, which is available on the BMC Support Central site (http://www.bmc.com/support).
DPSUMLD Return codes

The table load DPSUMLD program produces the following return codes:

<table>
<thead>
<tr>
<th>Return code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Successful completion</td>
</tr>
<tr>
<td>4</td>
<td>Warning issued</td>
</tr>
<tr>
<td>8</td>
<td>At least one major function was not completed</td>
</tr>
<tr>
<td>12</td>
<td>Catastrophic, no functions completed</td>
</tr>
</tbody>
</table>

All messages are written to the DPSYSOUT data set.

Informational messages for the DPSUMLD program

The following informational messages are produced by the table load DPSUMLD program. All messages are written to the DPSYSOUT data set.

- **DB2 CONNECTION ESTABLISHED**
  
  *Explanation:* The program has established DB2 connection. Processing continues.
  
  *User response:* No action is required.

- **LOAD CONTROL STATEMENT BUILT IN DLOAD DATA SET**
  
  *Explanation:* The program has written a DB2 load control statement to DLOAD data set. Processing continues.
  
  *User response:* No action is required.

- **PURGE SUCCESSFUL**
  
  *Explanation:* The program has completed the purge request successfully. Processing continues.
  
  *User response:* No action is required.

- **SUMMARIZATION SUCCESSFUL**
  
  *Explanation:* The program has completed summarization process successfully. Processing continues.
  
  *User response:* No action is required.
*** POSSIBLY WRONG VERSION TABLE??? ***

Explanation: This message suggests a possible reason for the "INVALID COLUMN" message. During migration of Performance Reporter tables, a mismatch between the program and table versions will cause invalid columns.

User response: Confirm that you are executing the newer version of DPSUMLD with the newer table.

Warning messages for the DPSUMLD program

The following warning messages are produced by the table load DPSUMLD program. All messages are written to the DPSYSOUT data set.

**DB2 WARNING MESSAGES RECEIVED**

Explanation: DB2 has issued warning messages. Processing continues.

User response: Refer to the warning message issued by DB2.

**PROCESSING CONTINUES AS INVFIELD=IGNORE**

Explanation: An invalid column was found. Processing continues as INVFIELD=IGNORE was specified.

User response: No action is required.

**THIS TABLE CONTAINS INVALID COLUMN xxxxxxxxxxxxxxx**

Explanation: The column xxxxxxxxxxxxxxx was an invalid column name for the type of table. Processing may continue, or the request is aborted. The action depends upon the INVFIELD= parameter.

User response: None if processing continues (INVFIELD=IGNORE). If request is aborted (INVFIELD=ABORT), check that the correct version of the table is being referenced and resubmit.

**NO SUMMARIZED OUTPUT RECORDS ARE PRODUCED**

Explanation: No summarized rows are produced. Processing continues.

User response: No action is required.

Error messages for the DPSUMLD program

The following error messages are produced by the table load DPSUMLD program. All messages are written to the DPSYSOUT data set.
CANNOT OPEN DPLOAD DATASET
Explanation: DPLOAD DD was not defined. The load request is aborted.
User response: Add DPLOAD DD for LOAD requests.

KEYWORD xxxxxxxx MUST BE SPECIFIED WITH VALUE
Explanation: The keyword xxxxxxxx does not have a default value and a value must be specified. The request is not processed.
User response: Supply correct value.

TABLE OR SUMMKEY MUST BE SPECIFIED
Explanation: Either TABLE or SUMMKEY must be specified in a summarization request. The request is not processed.
User response: Supply correct value.

EITHER FROMTBL OR FROMDD MUST BE SPECIFIED, BUT NOT BOTH
Explanation: FROMTBL and FROMDD are specified. One or the other must be specified, but not both. The request is not processed.
User response: Supply correct value.

EITHER EXPDT OR REPTD MUST BE SPECIFIED, BUT NOT BOTH
Explanation: EXPDT and REPTD are specified. One or the other must be specified, but not both. The request is not processed.
User response: Supply correct value.

SUMMKEY - LUWIDNID - IS ALLOWED ONLY IF TYPE IS SUMACCT OR SUMDDFACCT
Explanation: The SUMMKEY - LUWIDNID - is allowed only if the type is SUMACCT or SUMDDFACCT. The request is not processed.
User response: Do not use LUWIDNID as the SUMMKEY. Correct and resubmit.

SUMMKEY - LUWIDLUNM - IS ALLOWED ONLY IF TYPE IS SUMACCT OR SUMDDFACCT
Explanation: The SUMMKEY - LUWIDLUNM - is allowed only if the type is SUMACCT or SUMDDFACCT. The request is not processed.
User response: Do not use LUWIDLUNM as the SUMMKEY. Correct and resubmit.
SUMMKEY - DDFLOCATION - IS ALLOWED ONLY IF TYPE IS DDFACCT OR SUMDDFACCT

Explanation: The SUMMKEY - DDFLOCATION - is allowed only if the type is DDFACCT or SUMDDFACCT. The request is not processed.

User response: Do not use DDFLOCATION as the SUMMKEY. Correct and resubmit.

xxxxxxxxxxxxx IS NOT A VALID SUMMKEY VALUE

Explanation: The column xxxxxxxxxxxxxxxx is not a valid SUMMKEY column. The request is not processed.

User response: Supply correct value.

DB2 ERROR MESSAGES RECEIVED

Explanation: DB2 has issued error messages. The request is not processed.

User response: Refer to the DB2 error message received.

PROCESSING ABORTED AS INVFIELD=ABORT (DEFAULT)

Explanation: An invalid column was found. The request is not processed.

User response: Specify INVFIELD=IGNORE or redefine the table without the invalid column.

DATA AREA RUNS OUT. CONTACT BMC SOFTWARE

Explanation: The internal data area for SQLDA runs out. The request is not processed.

User response: Contact BMC Customer Support.

CANNOT OPEN xxxxxxxx DD, PROCESS TERMINATED

Explanation: The DD xxxxxxxx statement cannot be opened. The request is not processed.

User response: Correct the DD statement and resubmit.

SORT HAS ENCOUNTERED ERROR. SUMMARY PROCESS TERMINATED

Explanation: Errors have occurred in the sort. The request is not processed.

User response: Determine the reason for the sort error from the sort messages.

COMBINE FIELD - xxxxxxxxxxxxxxx IS AN INVALID FIELD, COMBINE ABORTED

Explanation: The field xxxxxxxxxxxxxxx defined in the COMBINE parameter is an invalid field. Processing of the COMBINE parameter is aborted.

User response: Supply correct values for the COMBINE parameter.
COMBINE FIELD - xxxxxxxxxxxxx HAS INVALID ATTRIBUTE, COMBINE ABORTED

Explanation: The COMBINE xxxxxxxxxxxxx field has an invalid or incompatible attribute. Processing of the COMBINE parameter is aborted.

User response: Supply correct values for the COMBINE parameter.

SUMMKEY - xxxxxxxxxxxxx IS NOT DEFINED IN RECEIVING TABLE

Explanation: The column xxxxxxxxxxxxx defined in SUMMKEY is not defined in the receiving table. The request is not processed.

User response: Supply correct values for SUMMKEY or TABLE.

DB2 CONNECTION NOT ESTABLISHED

Explanation: DB2 connection cannot be established. No further requests can be accepted.

User response: Refer to subsequent messages for diagnostics.

DB2 CONNECTION MUST BE ESTABLISHED BEFORE PROCESSING ANY REQUEST

Explanation: A request cannot be processed until the DB2 connection is established. The request is not processed.

User response: Find the reason for the DB2 connection failure.

MAKE SURE GLOBAL STATEMENT IS CODED

Explanation: DB2 connection is not established. No further requests can be accepted.

User response: Assure GLOBAL statement was coded; if it was, continue looking for the reason for the DB2 connection failure.

INVALID PARM PASSED. PROGRAM TERMINATED.

Explanation: An invalid PARM= was specified on the EXEC JCL statement. The only valid values are none, LOADPLUS, or NGTLOAD. The job step is terminated.

User response: Correct the PARM value and resubmit the job.
Data summary and purge process (DPRSUMP)

This section describes the DPRSUM batch job.

The purpose of this procedure is to:

■ Summarize rows in the DB2 detail accounting table or package accounting table into a summary table to save space and reduce processing costs

■ Summarize rows in a summary accounting table into a table that is summarized over a longer interval

■ Purge outdated data from the performance data tables

Note

Multiple summarize and purge processes can be specified in one run.

The summarization process accesses a detail accounting table and produces a new or updated summary accounting table. The purge process accesses any performance data table and deletes rows with a DATETIME earlier than the specified purge date or retention period.

Summarization strategy considerations

Flexibility is built into the summarization process to allow for differences in installation requirements.

Summarization should be performed, however, because the individual accounting records require considerable storage space.

It is very important to plan your summarization strategy prior to implementing the summarization process. For example, either changing the summarization keys or intervals, or purging from the detail table for a partial summary period can produce inconsistent reporting results.
You have several possible summarization strategies. For example:

- For greatest retention of detail, summarize the accounting data by location, subsystem, plan, authorization ID, connection type, and correlation ID. This strategy provides the greatest level of detail, but requires considerable storage. It does maintain uniqueness across workload types (such as batch or TSO) and CICS transaction code or IBM IMS PSBNAME.

- For less detailed data, summarize by location, subsystem, and plan. If the information is summarized any further, individual identity is lost and the summary begins to resemble the statistics records. The distributed summary reports by AUTHID then become unusable.

- To compromise between storage economy and usable detail, summarize by location, subsystem, plan, and authorization ID. This strategy retains accountability to the user (authorization ID) for a controlled period of time.

- After determining the key and estimating the number of unique occurrences to be expected with this specification, decide on one or more reasonable summarization intervals based on your reporting needs and available storage. A first-level summary interval can be as low as 5 or 30 minutes for greater detail, 60 minutes to allow for hourly reporting, or as long as a full day. This table can be summarized further into a second summary table.

**Note**

The default specifications are to load summary tables with intervals of 30 minutes in the SMF extract job (DPRSMF) and to summarize weekly to a second set of tables with intervals of one day in this job (DPRSUM).

To improve results:

- To match summary totals against the statistics reports, define the summary interval the same as the DB2 statistics interval.

- For ease in reading the resulting reports, define the summary start time on an even time period. For example, specify 05:00:00 to start summarization at 5:00am.

- To make it possible to begin a second table at weekly or monthly intervals, specify the receiving table name during the summarization process.

- To free storage space, purge outdated or summarized detail data. The detail rows should be purged after summarization. How long the summary data should be kept depends on its use.
DPRSUM job control statements

The following BBSAMP members provide sample JCL for the data summary, purge, and load process:

- DPRSUM (IBM LOAD method)
- DPRSUMNL (BMC NGT Load method)
- DPRSUMLP (BMC LOADPLUS method),

This section describes the DD statements used in sample JCL members. For information about the BMC LOADPLUS and BMC NGT Load methods, see “Control statement overview” on page 125.

Summary/purge procedure

This step specifies the name of the Performance Reporter summarize and load program as PGM=DPSUMLD.

For more information about DPSUMLD, including an EXEC statement parameter required when using the BMC LOADPLUS and NGT Load methods, see “DPSUMLD control statements” on page 124. Table 37 on page 149 describes the procedure statements for this step.

Table 37: Summary/purge procedure statements

<table>
<thead>
<tr>
<th>JCL Statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACBUFDD DD</td>
<td>Defines the input data set for the BUFACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACCELDD DD</td>
<td>Defines the input data set for the ACCA LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACCTDD DD</td>
<td>Defines the input data set for the ACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACDDFDD DD</td>
<td>Defines the input data set for the DDFACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACPKGDD DD</td>
<td>Defines the input data set for the PKGACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>BUFSACCT</td>
<td>Defines the output data set for the buffer pool SUMMARIZE process. This file is passed to Step 4 BUFSACCT.</td>
</tr>
<tr>
<td>BUFSSTAT DD</td>
<td>Defines the output data set for the BUFSTAT SUMMARIZE process</td>
</tr>
<tr>
<td>DDFSACCT</td>
<td>Defines the output data set for the DDF SUMMARIZE process. This file is passed to Step 4 DDFSACCT.</td>
</tr>
<tr>
<td>DDFSSTAT DD</td>
<td>Defines the output data set for the DDFSTAT SUMMARIZE process</td>
</tr>
<tr>
<td>DPDACACC</td>
<td>Defines the output dataset for the accounting accelerator data</td>
</tr>
</tbody>
</table>
### JCL Statements

<table>
<thead>
<tr>
<th>JCL Statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPLOAD DD</td>
<td>Defines the data set for DB2 LOAD control statements</td>
</tr>
<tr>
<td>DPSYSIN</td>
<td>For information on control statements, see “DPSUMLD control statements” on page 124.</td>
</tr>
<tr>
<td>DPSYSOUT DD</td>
<td>Defines the data set for DPSUMLD results</td>
</tr>
<tr>
<td>PKGSACCT</td>
<td>Defines the output data set for the package SUMMARIZE process. This file is passed to Step 4 PKGSACCT.</td>
</tr>
<tr>
<td>SORTWKnn DD</td>
<td>Defines work data sets for data sorting; nn is a numeric</td>
</tr>
<tr>
<td>STATDD DD</td>
<td>Defines the input data set for the STAT LOAD and SUMMARIZE process. Optionally, this statement defines the input data set for the DDFACCT and BUFACCT LOAD and SUMMARIZE processes.</td>
</tr>
<tr>
<td>STEPLIB DD</td>
<td>Defines the DB2 DSNLOAD data set and Performance Reporter load library</td>
</tr>
<tr>
<td>SUMMACCA</td>
<td>Defines the output data set for the SUMMARIZE process. This file is passed to Step 4.</td>
</tr>
<tr>
<td>SUMMACCS</td>
<td>Defines the output data set for the ACCS SUMMARIZE process</td>
</tr>
<tr>
<td>SUMMACCT DD</td>
<td>Defines the output data set for the SUMMARIZE process. This file is passed to Step 4 SUMMACCT.</td>
</tr>
<tr>
<td>SUMMSTAT DD</td>
<td>Defines the output data set for the STAT SUMMARIZE process</td>
</tr>
<tr>
<td>SUMMSYMB</td>
<td>Defines the output data set for the SYMB SUMMARIZE process. This file is passed to Step 4.</td>
</tr>
<tr>
<td>SYSOUT DD</td>
<td>Defines the output class for sort messages</td>
</tr>
<tr>
<td>SYSUDUMP DD</td>
<td>Defines the dump data set for problem determination</td>
</tr>
</tbody>
</table>

### Load into DB2 tables

This step specifies the name of the DB2 Utility program and the region that is required to run the program.

The steps to load the DB2 tables use one of the following utilities:

- DSNUTILB (IBM LOAD method)
- AMUUMAIN (BMC LOADPLUS utility)
- NGTUTIL (NGT Load utility)

If your installation uses a different utility, you must modify your JCL. The utility must be able to interpret LOAD control statements in the same format that DSNUTILB uses.

Table 38 on page 151 describes the DD statements used in this step.
### Table 38: Load DD statements

<table>
<thead>
<tr>
<th>JCL Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACBUFDD DD</td>
<td>Defines the input data set for the BUFACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACCELDD DD</td>
<td>Defines the input data set for the ACCA LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACCTDD DD</td>
<td>Defines the input data set for the ACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>ACDDFDD DD</td>
<td>Defines the input data set for the DDFACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>AUDITDD DD</td>
<td>Defines the input data set for the AUDIT LOAD utility</td>
</tr>
<tr>
<td>ACPKGDD DD</td>
<td>Defines the input data set for the PKGACCT LOAD and SUMMARIZE processes</td>
</tr>
<tr>
<td>BUFSACCT DD</td>
<td>Defines the input data set for the BUFACCT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>BUFSSTAT DD</td>
<td>Defines the input data set for the BUFSTAT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>DDFSACCT DD</td>
<td>Defines the input data set for the DDFACCT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>DDFSSTAT DD</td>
<td>Defines the input data set for the DDFSTAT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>PKGSACCT DD</td>
<td>Defines the input data set for the PKGACCT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>SORTOUT DD</td>
<td>Defines the data set for the SORT output</td>
</tr>
<tr>
<td>SORTWKnn DD</td>
<td>Defines work data sets for data sorting; nn is a numeric</td>
</tr>
<tr>
<td>STEPLIB DD</td>
<td>Defines the program library containing the DB2 Utility load program</td>
</tr>
<tr>
<td>SUMMACCA</td>
<td>Defines the output data set for the SUMMARIZE process. This file is passed to Step 4.</td>
</tr>
<tr>
<td>SUMMACCS</td>
<td>Defines the output data set for the ACCS SUMMARIZE process</td>
</tr>
<tr>
<td>SUMMACCT DD</td>
<td>Defines the input data set for the ACCT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>SUMMSTAT DD</td>
<td>Defines the input data set for the STAT SUMMARIZE LOAD utility</td>
</tr>
<tr>
<td>SUMMSYMB</td>
<td>Defines the output data set for the SYMB SUMMARIZE process. This file is passed to Step 4.</td>
</tr>
<tr>
<td>SYSDISC DD</td>
<td>Required for LOADPLUS processing, but not used</td>
</tr>
<tr>
<td>SYSSERR DD</td>
<td>LOADPLUS work data set, containing records with conversion errors</td>
</tr>
<tr>
<td>SYSIN DD</td>
<td>Defines the input data set containing the DB2 LOAD utility control statement</td>
</tr>
<tr>
<td>SYSPRINT</td>
<td>Defines the data set for program messages</td>
</tr>
<tr>
<td>SYSREC DD</td>
<td>Defines the input data set, consisting of a concatenation of all the data to be loaded</td>
</tr>
<tr>
<td>SYSUDUMP DD</td>
<td>Defines the dump data set for problem determination</td>
</tr>
<tr>
<td>JCL Statement</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>SYSUT1 DD</td>
<td>LOADPLUS work data set</td>
</tr>
<tr>
<td>(for the BMC LOADPLUS method only)</td>
<td></td>
</tr>
<tr>
<td>UTPRINT DD</td>
<td>Defines the data set for DFSORT messages</td>
</tr>
</tbody>
</table>

**Summarization/purge return codes and error messages**

The return codes and messages produced by the summary/purge program are the same as those produced by the table load program.

Messages are documented in the BMC Documentation Center, which is available on the BMC Support Central site (http://www.bmc.com/support).

For more information, see “DPRSMF return codes and error messages” on page 141.
Reports from DB2 tables

The performance reports from DB2 tables are organized into the following three groups:

- Accounting data
- Statistics data
- Audit data

This section discusses the report naming conventions and provides a table of all the reports grouped by DB2 area of activity (see “Areas of DB2 activity” on page 154).

Naming conventions

A naming format has been assigned to the reports supplied with this product to allow for a faster understanding of the data source and basic orientation of each report.

A report name is constructed this way:

\[ xxzzzzzy \]

The following table describes the naming convention for the report name.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>( xx )</td>
<td>Data source</td>
<td></td>
</tr>
<tr>
<td></td>
<td>— AC (Detailed accounting data)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>— SA (Summarized accounting data)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>— ST (Statistics data)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>— AU (Audit data)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>— SS (Summarized statistics data)</td>
<td></td>
</tr>
</tbody>
</table>
### Areas of DB2 activity

The following table shows all the reports from DB2 tables grouped by DB2 area of activity:

#### Table 40: DB2 performance reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>General DB2 System</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>DB2 Accounting Overview Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>xOVERy</td>
<td>— ACOVERA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACOVERP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SAOVERA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SAOVERP (Summary Accounting, by Plan)</td>
</tr>
</tbody>
</table>

---

**zzzz**

Report name
For buffer pool or global buffer pool reports, these characters are further refined as:
- BFpzz (buffer pool)
- GBpzz (global buffer pool)

**Notes**
- Groups the buffer pools by:
  - A (All buffer pools)
  - X (Single buffer pool)

**zz**
- Defines:
  - T (Totals)
  - A (Averages)
  - VP (Virtual pool activity)
  - PF (Prefetch activity)
  - HP (Hiperpool activity)
  - EX (Exceptions — buffer pool or global pool)
  - Null (Global pool activity)
  - 2 (Extended report)

**y**

Report orientation
- P (Plan oriented report — from accounting data)
- A (AUTHID oriented report — from accounting data)
- Null (Date oriented report — from statistics data, or report oriented by both AUTHID and plan — from audit data)
### Report

<table>
<thead>
<tr>
<th>xxOVDFy</th>
<th>DB2 DDF Accounting Overview Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— ACOVDFA (DDF Detail Accounting, by AUTHID and Location)</td>
</tr>
<tr>
<td></td>
<td>— ACOVDFP (DDF Detail Accounting, by Plan and Location)</td>
</tr>
<tr>
<td></td>
<td>— SAOVDFA (DDF Summary Accounting, by AUTHID and Location)</td>
</tr>
<tr>
<td></td>
<td>— SAOVDFP (DDF Summary Accounting, by Plan and Location)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>xxOVER</th>
<th>DB2 Statistics Overview Report—Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— STOVER (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSOVER (Summary Statistics Overview)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>xxOVERT</th>
<th>DB2 Statistics Overview Report (Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— STOVERT (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSOVERT (Summary Statistics Overview)</td>
</tr>
</tbody>
</table>

| ACEXCEP | DB2 Accounting Exceptions Report |

<table>
<thead>
<tr>
<th>xxEXTHD</th>
<th>DB2 Statistics Thread-Related Exceptions Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— STEXTHD (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSEXTHD (Summary Statistics Overview)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>xxEXSYS</th>
<th>DB2 Statistics System Exceptions Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— STEXSYS (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSEXSYS (Summary Statistics Overview)</td>
</tr>
</tbody>
</table>

### User Activity

<table>
<thead>
<tr>
<th>xxSQLy</th>
<th>DB2 Accounting SQL Report—Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— ACSQLA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACSQLP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SASQLA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SASQLP (Summary Accounting, by Plan)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>xxSQL</th>
<th>DB2 Statistics SQL Report—Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— STSQLT (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSSL (Summary Statistics Overview)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>xxDYNCy</th>
<th>DB2 Accounting Dynamic SQL Statement Cache Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— ACDYNCA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACDYNCP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SADYNCA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SADYNCP (Summary Accounting, by Plan)</td>
</tr>
</tbody>
</table>
### Areas of DB2 activity

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>xxDYNC</td>
<td>DB2 Statistics Dynamic SQL Statement Cache Report</td>
</tr>
<tr>
<td></td>
<td>— STDYNC (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSDYNC (Summary Statistics Overview)</td>
</tr>
<tr>
<td>xxCPUy</td>
<td>DB2 Accounting CPU/Elapsed Time Report</td>
</tr>
<tr>
<td></td>
<td>— ACCPUA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACCPUP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SACPUA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SACPUP (Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>xxCPDFy</td>
<td>DB2 DDF Accounting CPU/Elapsed Time Report</td>
</tr>
<tr>
<td></td>
<td>— ACCPDFA (DDF Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACCPDFP (DDF Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SACPDFA (DDF Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SACPDFP (DDF Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>xxPKGy</td>
<td>DB2 Accounting Package Report</td>
</tr>
<tr>
<td></td>
<td>— ACPKGA (Package Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACPKGP (Package Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SAPKGA (Package Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SAPKGP (Package Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>xxPKGS</td>
<td>DB2 Summary Accounting Package Suspensions Report</td>
</tr>
<tr>
<td></td>
<td>— ACPKGS (Accounting Package Suspensions)</td>
</tr>
<tr>
<td></td>
<td>— SAPKGS (Package Summary Accounting Suspensions)</td>
</tr>
<tr>
<td>xxCPU</td>
<td>DB2 Statistics CPU Time Report</td>
</tr>
<tr>
<td></td>
<td>— STCPU (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSCPU (Summary Statistics Overview)</td>
</tr>
<tr>
<td>xxPLIOy</td>
<td>DB2 Accounting Parallelism Report</td>
</tr>
<tr>
<td></td>
<td>— ACPLIOA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACPLIOP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SAPLIOA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SAPLIOP (Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>xxPLIO</td>
<td>DB2 Statistics Parallelism Report</td>
</tr>
<tr>
<td></td>
<td>— STPLIO (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSPLIO (Summary Statistics Overview)</td>
</tr>
<tr>
<td>Report</td>
<td>Title</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| xxSPRCy | DB2 Accounting Stored Procedures Report  
|         |   — ACSPRCA (Detail Accounting, by AUTHID)  
|         |   — ACSPRCP (Detail Accounting, by Plan)  
|         |   — SASPRCA (Summary Accounting, by AUTHID)  
|         |   — SASPRCP (Summary Accounting, by Plan)  |
| xxSPROC | DB2 Statistics Stored Procedures Report  
|         |   — STSPROC (Detail Statistics Overview)  
|         |   — SSSPROC (Summary Statistics Overview)  |
| xxDDFxy | DB2 Accounting DDF Local Report  
|         |   — ACDDFLA (Local Activity Detail DDF Accounting, by AUTHID)  
|         |   — ACDDFLP (Local Activity Detail DDF Accounting, by Plan)  
|         |   — SADDFLA (Local Activity Summary DDF Accounting, by AUTHID)  
|         |   — SADDFLP (Local Activity Summary DDF Accounting, by Plan)  |
| xxDDFxy | DB2 Accounting DDF Remote Report  
|         |   — ACDDFRA (Remote Activity Detail DDF Accounting, by AUTHID)  
|         |   — ACDDFRP (Remote Activity Detail DDF Accounting, by Plan)  
|         |   — SADDFRA (Remote Activity Summary DDF Accounting, by AUTHID)  
|         |   — SADDFRP (Remote Activity Summary DDF Accounting, by Plan)  |
| xxOVDFT | DB2 Statistics DDF Overview Report (Totals)  
|         |   — STOVDFT (Detail Statistics Overview)  
|         |   — SSOVDFT (Summary Statistics Overview)  |
| xxLOCKy | DB2 Accounting Lock/Latch Report  
|         |   — ACLOCKA (Detail Accounting, by AUTHID)  
|         |   — ACLOCKP (Detail Accounting, by Plan)  
|         |   — SALOCKA (Summary Accounting, by AUTHID)  
|         |   — SALOCKP (Summary Accounting, by Plan)  |
| xxLOCK  | DB2 Statistics Lock Report  
|         |   — STLOCK (Detail Statistics Overview)  
<p>|         |   — SSLOCK (Summary Statistics Overview)  |</p>
<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>xxGLOKγ</td>
<td>DB2 Accounting Global Lock Report</td>
</tr>
<tr>
<td></td>
<td>— ACGLOKA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACGLOKP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SAGLOKA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SAGLOKP (Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>EDM Pool</td>
<td></td>
</tr>
<tr>
<td>xxGLOCK</td>
<td>DB2 Statistics Global Lock Report</td>
</tr>
<tr>
<td></td>
<td>— STGLOCK (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSGLOCK (Summary Statistics Overview)</td>
</tr>
<tr>
<td>xxEDM</td>
<td>DB2 Statistics EDM Pool Report</td>
</tr>
<tr>
<td></td>
<td>— STEDM (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSEDM (Summary Statistics Overview)</td>
</tr>
<tr>
<td>xxEDM2</td>
<td>DB2 Statistics EDM Pool Extended Report</td>
</tr>
<tr>
<td></td>
<td>— STEDM2 (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSEDM2 (Summary Statistics Overview)</td>
</tr>
<tr>
<td>Buffer Pools</td>
<td></td>
</tr>
<tr>
<td>xxBFxTy</td>
<td>DB2 Accounting Buffer Pool Report—Totals</td>
</tr>
<tr>
<td></td>
<td>— ACBFATA (Detail Accounting, by AUTHID (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— ACBFATP (Detail Accounting, by Plan (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— SABFATA (Summary Accounting, by AUTHID (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— SABFATP (Summary Accounting, by Plan (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— ACBFXTA (Detail Accounting, by AUTHID (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— ACBFXTP (Detail Accounting, by Plan (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SABFXTA (Summary Accounting, by AUTHID (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SABFXTP (Summary Accounting, by Plan (Single Buffer Pool)</td>
</tr>
<tr>
<td>xxBFxAy</td>
<td>DB2 Accounting Buffer Pool Report (Averages</td>
</tr>
<tr>
<td></td>
<td>— ACBFAAA (Detail Accounting, by AUTHID (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— ACBFAAP (Detail Accounting, by Plan (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— SABFAAA (Summary Accounting, by AUTHID (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— SABFAAP (Summary Accounting, by Plan (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— ACBFXAA (Detail Accounting, by AUTHID (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— ACBFXAP (Detail Accounting, by Plan (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SABFXAA (Summary Accounting, by AUTHID (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SABFXAP (Summary Accounting, by Plan (Single Buffer Pool)</td>
</tr>
<tr>
<td>Report</td>
<td>Title</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>xxBFpVP</td>
<td>DB2 Statistics Buffer Pool Activity Report</td>
</tr>
<tr>
<td></td>
<td>— STBFAVP (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— STBFXVP (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SSBFAVP (Summary Statistics All Buffer Pools Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSBFXVP (Summary Statistics Single Buffer Pool)</td>
</tr>
<tr>
<td>xxBFpPF</td>
<td>DB2 Statistics Buffer Pool Prefetch Activity Report</td>
</tr>
<tr>
<td></td>
<td>— STBFAPF (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— STBFXPF (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SSBFAPF (Summary Statistics All Buffer Pools Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSBFXPF (Summary Statistics Single Buffer Pool)</td>
</tr>
<tr>
<td>xxBFpEX</td>
<td>DB2 Statistics Buffer Pool Exceptions Report</td>
</tr>
<tr>
<td></td>
<td>— STBFAEX (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>— STBFXEX (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>— SSBFAEX (Summary Statistics All Buffer Pools Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSBFXEX (Summary Statistics Single Buffer Pool)</td>
</tr>
<tr>
<td>xXRIDy</td>
<td>DB2 Accounting RID List Access Report</td>
</tr>
<tr>
<td></td>
<td>— ACRIDA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACRIDP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SARIDA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SARIDP (Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>xXRID</td>
<td>DB2 Statistics RID Activity Report</td>
</tr>
<tr>
<td></td>
<td>— STRID (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>— SSRID (Summary Statistics Overview)</td>
</tr>
<tr>
<td>xxGBATy</td>
<td>DB2 Accounting Global BPool Report—Totals</td>
</tr>
<tr>
<td></td>
<td>— ACGBATA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACGBATP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SAGBATA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SAGBATP (Summary Accounting, by Plan)</td>
</tr>
<tr>
<td>xxGBAAy</td>
<td>DB2 Accounting Global BPool Report—Averages</td>
</tr>
<tr>
<td></td>
<td>— ACGBAAA (Detail Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— ACGBAAP (Detail Accounting, by Plan)</td>
</tr>
<tr>
<td></td>
<td>— SAGBAAA (Summary Accounting, by AUTHID)</td>
</tr>
<tr>
<td></td>
<td>— SAGBAAP (Summary Accounting, by Plan)</td>
</tr>
</tbody>
</table>
## Areas of DB2 activity

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>xxGBP</td>
<td>DB2 Statistics Global BPool Activity Report</td>
</tr>
<tr>
<td></td>
<td>- STGBA (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>- STGBX (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>- SSGBA (Summary Statistics All Buffer Pools Overview)</td>
</tr>
<tr>
<td></td>
<td>- SSGBX (Summary Statistics Single Buffer Pool)</td>
</tr>
<tr>
<td>xxGBP2</td>
<td>DB2 Statistics Global BPool Activity Extended Report</td>
</tr>
<tr>
<td></td>
<td>- STGBA2 (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>- STGBX2 (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>- SSGBA2 (Summary Statistics All Buffer Pools Overview)</td>
</tr>
<tr>
<td></td>
<td>- SSGBX2 (Summary Statistics Single Buffer Pool)</td>
</tr>
<tr>
<td>xxGBPpEX</td>
<td>DB2 Statistics Global BPool Exceptions Report</td>
</tr>
<tr>
<td></td>
<td>- STGBAEX (All Buffer Pools)</td>
</tr>
<tr>
<td></td>
<td>- STGBXEX (Single Buffer Pool)</td>
</tr>
<tr>
<td></td>
<td>- SSGBAEX (Summary Statistics All Buffer Pools Overview)</td>
</tr>
<tr>
<td></td>
<td>- SSGBXEX (Summary Statistics Single Buffer Pool)</td>
</tr>
<tr>
<td>xxLOGIO</td>
<td>DB2 Statistics Logging Report</td>
</tr>
<tr>
<td></td>
<td>- STLOGIO (Detail Statistics Overview)</td>
</tr>
<tr>
<td></td>
<td>- SSLOGIO (Summary Statistics Overview)</td>
</tr>
</tbody>
</table>

### Logs

| xxLOGIO   | DB2 Statistics Logging Report                                        |
|           | - STLOGIO (Detail Statistics Overview)                               |
|           | - SSLOGIO (Summary Statistics Overview)                              |

### Audit

| AUSUM      | DB2 Audit Summary Report                                            |
| AUDML      | DB2 Audited DML Access Report                                       |
| AUFAIL     | DB2 Authorization Failures Report                                   |
| AUDGRV     | DB2 Authorization Control (GRANTs / REVOKEs Report)                  |
| AUDDL      | DB2 Audited DDL Access Report                                       |
| AUDMLB     | DB2 DML at BIND Report                                              |
| AUCHNG     | DB2 AUTHID Change Report                                            |
| AUUTIL     | DB2 Audit Utility Access Report                                     |
| AUDTL      | DB2 Audit Detail Report                                             |
The reports from DB2 tables provided by Performance Reporter contain a common format for the report page heading.

Figure 28: Sample Performance Reporter report page layout

Table 41 on page 161 lists the headings shown on each of the reports.

Table 41: Performance Reporter report page headings

<table>
<thead>
<tr>
<th>#</th>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DATE TO</td>
<td>Ending datetime range of data encountered when producing this report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If the SQL SELECT statement is not programmed according to the restrictions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>noted in “Report customization” on page 170, blanks are printed by the DPRREPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>program. All MainView for DB2 reports provide this information.</td>
</tr>
<tr>
<td>2</td>
<td>DATE FROM</td>
<td>Start datetime range of data encountered when producing this report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If the SQL SELECT statement is not programmed according to the restrictions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>noted in “Report customization” on page 170, blanks are printed by the DPRREPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>program. All MainView for DB2 reports provide this information.</td>
</tr>
<tr>
<td>3</td>
<td>REPORT</td>
<td>Name of the query that produced this report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is the BBPARM member containing the SQL query processed by DPRREPT.</td>
</tr>
<tr>
<td>4</td>
<td>COPYRIGHT</td>
<td>Company name denotes the copyright of the company</td>
</tr>
<tr>
<td>5</td>
<td>TITLE</td>
<td>Report title that describes the nature of the data contained within this report</td>
</tr>
<tr>
<td>6</td>
<td>PAGE</td>
<td>Page number of this report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On reports produced by DPRREPT page numbering starts at 1 for each report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>selected within a run of this program.</td>
</tr>
<tr>
<td>7</td>
<td>REPORT DATE</td>
<td>The date that this report was run or produced</td>
</tr>
</tbody>
</table>
### Single buffer pool data

By default, reports for single buffer pools show data about buffer pool BP0.

For a different, single buffer pool, you can customize a copy of the BBPARM member for the report as follows:

- **WHERE clause of SQL statement**

  Change `BPNAME = 'BP0 '` to `BPNAME = BP`x`, where `x` is the buffer pool ID of the single buffer pool to be reported (BP0-BP49, BP8K-BP8K9, BP16K-BP16K9, BP32K-BP32K9).

- **Title line**

  Change `(BP0)` to `(BP`x`), where `x` is the buffer pool ID of the single buffer pool to be reported.

### DB2 tables reporting facilities

This section discusses the facilities enabling report production from the data in DB2 tables.

Reporting flexibility and a historical perspective is achieved by storing the Performance Reporter data within DB2. Performance Reporter provides predefined reports using SQL statements, which can be run through a batch reporting facility (DPRREPT) or through QMF queries. Other queries and reports based on the performance data tables can also be defined.
The input to this process is any of the performance data tables. Reports, charts, and plots of DB2 performance comprise the output.

Prepared reports

The prepared reports included with Performance Reporter show DB2 system workload to help the DB2 performance analyst, capacity planner, or service manager solve specific DB2 problems.

These reports are generated from three types of data, described in the following table:

Table 42: Prepared reports types of data

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting data</td>
<td>Pertains to the execution of a program, transaction, or plan&lt;br&gt;The data can be from the detail accounting table (one row per plan execution) or from the summary accounting table (one row per summary interval per unique key). It can show base, DDF, or optional package information. Data can be further summarized by time.</td>
</tr>
<tr>
<td>Statistics data</td>
<td>Shows activity within the system at discrete intervals (DB2 statistics interval)&lt;br&gt;The data can be from the detail statistics table (one row per plan execution) or from the summary statistics table (one row per summary interval per unique key). It can show base, DDF, or detail buffer pool information. Data can be further summarized by time.</td>
</tr>
<tr>
<td>Audit data</td>
<td>Shows audit activity for each authorization ID and plan, and can show information about:&lt;br&gt;- Audit summary&lt;br&gt;- Audited DML access&lt;br&gt;- Authorization failures&lt;br&gt;- Authorization control - GRANTs/REVOKEs&lt;br&gt;- Audited DDL access&lt;br&gt;- DML at BIND&lt;br&gt;- AUTHID change&lt;br&gt;- Audit utility access&lt;br&gt;- Audit detail</td>
</tr>
</tbody>
</table>

Organization

The reports from both accounting and statistics data are organized as follows:
<table>
<thead>
<tr>
<th>Report type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General DB2 System</td>
<td>Overview and exception reports</td>
</tr>
<tr>
<td>User Activity</td>
<td>SQL, CPU/elapsed time reports, and package reports</td>
</tr>
<tr>
<td>DDF Activity</td>
<td>Local and Remote DB2 Accounting DDF</td>
</tr>
<tr>
<td>Locks</td>
<td>Lock and latch activity</td>
</tr>
<tr>
<td>EDM Pool</td>
<td>EDM pool statistics</td>
</tr>
<tr>
<td>Buffer Pools</td>
<td>Buffer pool overview and detail reports</td>
</tr>
<tr>
<td>Logging</td>
<td>DB2 logging statistics</td>
</tr>
<tr>
<td>Audit</td>
<td>DB2 audit activity</td>
</tr>
</tbody>
</table>

### Naming convention for prepared reports

A naming format has been assigned to the reports to allow for a faster understanding of the data source and basic orientation of each report.

For more information, see “Naming conventions” on page 153.

### Custom reports and charts

Since Performance Reporter uses a generalized report generator to provide reporting and charting facilities, the entire report is defined by the SQL SELECT statement used to read the data table(s).

This enables the creation of customized reports. The SQL select statements used to produce the distributed reports and charts are available, within the DPRREPT environments, as models in tailoring new reports or charts.

There are some restrictions placed on SQL statements used by DPRREPT to control page formatting; however, their use is optional. For information about the restrictions, see “Report customization” on page 170. To construct meaningful SQL SELECT statements to report on performance data tables contents, you should be familiar with the contents of these tables as described in “Performance data tables” on page 339. All the rules of programming SQL statements must be followed.

Of course, other DB2 reporting facilities available in-house, such as various fourth generation languages with a DB2 interface, can be used to access the MainView for DB2 performance data tables.
Standard reporting

Standard reporting can be run on a daily or weekly basis, or both.

Daily run

The queries processed by DPRREPT, from the detail statistics (queries STxxx) and detail accounting (queries ACxxxx) tables, are set up to produce a set of daily reports about the data loaded from the previous day (current date minus one).

The sample JCL in BBSAMP member DPRRPT includes all distributed reports. Run these reports once, select those ACxxxx and STxxx reports you want to review daily, and create a job for this daily run.

Weekly run

The queries processed by the batch reporting program, DPRREPT, from the summary accounting table (queries SAxxxx) are set up to produce a set of weekly reports on the data from the previous week (current date to current date minus seven).

Select the SAxxx reports you want to review weekly and create a job for this weekly run.

Ad hoc reporting

Any of the distributed SQL queries can be modified or used as a model to produce queries to satisfy ad hoc reporting needs. However, the flexibility of QMF, in general, makes it the better vehicle for such reporting. An added advantage with QMF is that the procs provide an easy way to select a specific time period for reporting without modifying the queries themselves.

Batch reporting facility (DPRREPT)

The queries on the detail tables automatically produce a report of yesterday’s data.

These queries can be modified (for more information, see “Report customization” on page 170). The same reports are also produced by the batch reporting facility.
JCL statements

The BBSAMP member DPRREPT provides sample JCL to produce predefined reports in a single-step procedure.

The following table describes the job control language (JCL) statements that are used in the DPRREPT member.

Table 43: Batch reporting procedure JCL statements

<table>
<thead>
<tr>
<th>JCL Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPORT</td>
<td>Specifies the name of the Performance Reporter batch program as PGM=JXREPT and the region required to run the program</td>
</tr>
<tr>
<td>STEPLIB DD</td>
<td>Defines the program library containing the JXREPT module</td>
</tr>
<tr>
<td>JXRPPRT DD</td>
<td>Defines the diagnostic messages and counts from reporting</td>
</tr>
<tr>
<td>JXRPREP DD</td>
<td>Defines the requested reports</td>
</tr>
<tr>
<td>SYSUDUMP DD</td>
<td>Defines the dump data set for problem determination</td>
</tr>
<tr>
<td>JXRPSQL DD</td>
<td>Defines the BBPARM library containing the report definitions</td>
</tr>
<tr>
<td>JXRPUT1 DD</td>
<td>Defines the utility work data set for reporting</td>
</tr>
<tr>
<td>JXRPIN DD</td>
<td>Defines the input control statements The syntax for this command is detailed in Table 44 on page 166.</td>
</tr>
</tbody>
</table>

Table 44 on page 166 describes the syntax of the JXPRIN DD command.

Table 44: JXRPIN DD syntax

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSID=</td>
<td>Identifies the name of the DB2 system that contains the tables from which the reports are to be generated The reporting program establishes a CAF connection. Reports may be generated from multiple DB2 systems by re-specifying this value.</td>
</tr>
<tr>
<td>PLAN=</td>
<td>identifies the plan name for reporting (default is JXREPT)</td>
</tr>
<tr>
<td>Syntax</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>&amp;DATE=</td>
<td>Defines the date range for reported data, which can include any valid SQL WHERE restrictions in addition to the required DATE operand. This value replaces the default DATE SQL statement in all following BBPARM members (until another &amp;DATE or &amp;WHERE statement is found). All characters after the equal sign (=) through the last non-blank character on a line are substituted. If the substitution value is longer than one line, put any non-blank character in column 72 and continue the substitution value in column 1 of the next line. &amp;DATE supports either direct substitution from the input statement using DB2's CURRENT DATE special register or substituted calculated relative dates. Relative dates are requested with the use of * for today's date or <em>_Nx-M for a range of dates relative to the current time period. <strong>Note:</strong> Use of the calculated relative dates (</em> forms) is highly recommended and results in index usage with significant performance advantages over using DB2's CURRENT DATE special register.</td>
</tr>
<tr>
<td>&amp;WHERE=</td>
<td>Defines any valid SQL WHERE clause for reported data, but has special processing for DATE and CURRENT DATE values to provide an explicit date. The advantage over &amp;DATE is that DB2 can access the data through an index when a single date is requested with &amp;WHERE. This process provides much improved performance. This value replaces the default WHERE SQL statement in all following BBPARM members (until another &amp;WHERE or &amp;DATE statement is found). All characters after the &amp;WHERE through the last nonblank character on a line are substituted. If the substitution value is longer than one line, put any nonblank character in column 72 and continue the substitution value in column 1 of the next line. However, DATE and CURRENT DATE must appear on the first line.</td>
</tr>
<tr>
<td>&amp;CYCLE=HOURLY</td>
<td>Defines an interval for summarizing report data. Report SELECT statements are modified and the GROUP BY clause is used to summarize the data by the interval requested. The summarization interval remains in effect for all following BBPARM members until another &amp;CYCLE statement is processed. &amp;CYCLE=RESET results in cancelling a previous &amp;CYCLE statement. Each time a new interval occurs in the report, the new time is displayed either as a new report line or by replacing an existing DATETIME report column. Parameters are mutually exclusive except either WORKWKLY or WEEKENDS may be used with the interval selections. WORKWKLY limits report data table records to those created by DB2 on Monday through Friday and WEEKENDS limits report data to Saturday and Sunday.</td>
</tr>
<tr>
<td>DATETIME=YES</td>
<td>Requests DATETIME column be added to the GROUP BY clause of the report SELECT statement. This control statement is intended to be used for reports from accounting summarization data and displays the time of the summarized accounting record as a separate report line. DATETIME=YES activates the function and DATETIME=NO cancels it.</td>
</tr>
</tbody>
</table>

*x* can be D for Day (default), W for Week, or M for Month

_\_N_ represents the number of time periods, prior to the current one, to be selected as the from value

_-M_ is optional and it represents the up to value in the time periods as defined by *x*. The selected data will not include the data relative to the current period of time. If -M is not used, the up to value is set to the current time period.
**Syntax** | **Description**  
---|---  
&TABLE= | Identifies the table from which reported data is selected  
This value replaces the first table name identified in the FROM SQL statement in the BBPARM members.  

&TABLE2= | Identifies the table from which reported data is selected  
This value replaces the second table name identified in the FROM SQL statement in the BBPARM members.  

mbrnames | Keyword indicating the JXRPSQL member name that defines the report to be executed  
You can specify multiple member names on different lines. These members reside in the data set defined by JXRPSQL.  

* (asterisk) | When this character is in column one, it specifies a comment

---

**Examples of defining date ranges**

The following examples illustrate how to use the &DATE and &WHERE syntax to define date ranges.

To generate reports of today's data, use:

---

**Example**

&DATE=*  

---

For reports of yesterday’s data only, use:

---

**Example**

&DATE=* _1-*  

or  
&DATE=* _1D-*

---

For reports of yesterday’s data for a specific subsystem, use:

---

**Example**

&WHERE=DATE=CURRENT DATE-1 AND SUBSYSTEM='ssss'

---

For reports of yesterday’s data and today’s date, use:

---

**Example**

&DATE=* _1
For reports of the previous week’s data, not including data from the current week use:

---
Example

&DATE=*_1W-*
---

For reports of the previous month’s data, but not including any data from the current month, use:

---
Example

&DATE=*_1M-*
---

For reports of the previous month’s data for the previous year, use:

---
Example

&DATE=*_12M-*_11
---

For reports using the CURRENT DATE special register and DB2 functions with yesterday’s data, use:

---
Example

&DATE= = DATE(DAYS(CURRENT_DATE)-1)
---

Note

The repeated equal sign in the previous example is not a typographical error.

For reports using the CURRENT DATE special register and DB2 functions with the past week’s data, use:

---
Example

&DATE= BETWEEN DATE(DAYS(CURRENT_DATE)-6) AND CURRENT_DATE
---

### Batch reporting facility return codes and error messages

The following return codes and messages are produced by the batch reporting facility (JXREPT).

#### Return codes

The return codes produced by the JXREPT program are:
- 0—successful completion
- 4—warning issued
- 8—at least one major function was not completed
- 12—catastrophic, no functions completed

Messages

The batch reporting facility (JXREPT) writes all informational, warning, and error messages to the JXRPPRT data set.

Messages are documented in the BMC Documentation Center, which is available on the BMC Support Central site (http://www.bmc.com/support).

Report customization

The JXREPT program is designed to run any SQL SELECT statement against the Performance Reporter tables and report the results.

For a description of the reports distributed with Performance Reporter, see “Prepared reports” on page 163.

The following figure shows a sample option of customizing the input to DPRREPT:

**Figure 29: Sample input to DPRREPT**

```
SELECT LOCATION,SUBSYSTEM,XXXXX, FIELD-1, FIELD-2, FIELD-3, FIELD-N, MIN(DATETIME), MAX(DATETIME)
FROM DMRPR.DMRXXXX
GROUP BY LOCATION,SUBSYSTEM,XXXXX;
```

<table>
<thead>
<tr>
<th>XXXXXXXXXXXXXXXXXXXXXXXXX</th>
<th>-----------------------------</th>
<th>TITLE</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XX</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XX</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XX</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XX</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

--- COLUMN HEADER LINE 1
--- COLUMN HEADER LINE 2
--- COLUMN HEADER LINE 3
SQL SELECT statement recommendations

When customizing, some conventions must be followed to produce consistent results and the complete page format as demonstrated within the distributed reports.

The recommendations for SQL SELECT statements are as follows:

- The first two columns returned in the SELECT statement should be LOCATION and SUBSYSTEM, in that order.
  Placing these two columns first in the SELECT statement results in page breaks on LOCATION and SUBSYSTEM changes. The columns normally produced within the body of the report do not occur when this convention is observed. This information will be reported within the page header lines instead.
  If you do not observe this convention, the report will have no special page breaks based on these values. The data, if selected in other than the first two columns, will occur as columns within the body of the report.

- The last two columns in the SELECT statement should be MIN(DATETIME) and MAX(DATETIME), in that order.
  Placing these columns in the SELECT statement results in the range of data encountered within the tables to be reported within the page header. When this convention is followed, these last two columns do not appear in the body of the report. Be careful not to select other timestamp data type columns as the last two columns to avoid incorrect results.
  If you do not observe this convention, blanks appear in place of these date ranges in the page headers.

- When LOCATION and SUBSYSTEM are the first two columns selected, LOCATION and SUBSYSTEM should be the highest sequencing field in an ORDER BY clause in the SELECT statement.
  This procedure allows the reports with page breaks on LOCATION and SUBSYSTEM changes to be properly paginated.
  Failure to follow this convention can result in quite excessive and incorrect pagination for the report.

Report headers definition

Each sample report has its headers defined in the same member as the SQL SELECT statement, beginning in the line following the SQL completion semicolon (;).

Each header line requires two lines in the member. Data is specified in columns 1-71. A non-blank continuation character must be specified in column 72 of the first line of each pair. Headers are 132 characters long; specify 71 characters in the first line and 61 characters in the continuation. All headers are single spaced.
Header fields supplied automatically by the DPRREPT program are indicated with a series of X characters. These fields are:

- Header 1 - Company name (left), page number (right)
- Header 2 - Report name (left), report date (right)
- Header 3 - Date from (left), system (right)
- Header 4 - Date to (left), subsystem (right)
- Header 5 - Blank line

Fields that can be modified are:

- Header 1 - title (middle) - Blank if not specified
- Headers 6 - 11 - One through six column headers

If no column headers are defined, SQL field names are used where possible and otherwise left blank. When calculating column spacing, observe that one blank is left between each data column.

**Statistics data reporting by time interval**

The default statistics reports show statistics by the DATETIME stamp in each record. To provide a historical view, you may want to modify the distributed reports to show statistics grouped by a longer time interval. To simplify this type of reporting, the statistics tables include columns for several other date and time values, such as DATE, MONTH, DAY, TIME, and HOUR.

*Note*

Data is not spread across intervals.

An example of a report by DATE and HOUR is in BBPARM member STOVERH, as shown in Figure 30 on page 172.
The following changes were made to the STOVER report to create this example, and similar changes can be made to any other statistics report:

- In the SELECT statement, add the desired columns (A.DATE and A.HOUR) after A.SUBSYSTEM and before the selected data columns, replacing the substring of DATETIME.

- Change the Group By clause to `GROUP BY A.LOCATION, A.SUBSYSTEM, A.DATE, A.HOUR`

- Optionally, change the column header DATETIME to DATE / HOUR.

- Change the WHERE clause with parameters at runtime to select the time period to report.

**Order of audit reports identifiers**

The sample audit reports are ordered by primary authorization ID and plan name. However, you can easily change this order to any of the following identifiers:

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECT</td>
<td>Connection ID</td>
</tr>
<tr>
<td>CORRNAME</td>
<td>Correlation name</td>
</tr>
<tr>
<td>CORRNMBR</td>
<td>Correlation number</td>
</tr>
<tr>
<td>ORIGAUTH</td>
<td>Original authorization ID</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>Plan name</td>
</tr>
<tr>
<td>PRIMAUTH</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>REQLOC</td>
<td>Requesting location</td>
</tr>
</tbody>
</table>
Report field definitions

This section describes the fields in the performance reports that can be produced by the MainView for DB2 - Data Collector.

Accounting report fields

The topics in this section describe the fields in the most commonly used accounting reports, the Accounting summary—long report (BACCTDR) and the Accounting detail trace—long report (BACCTLT). BACCTDR provides both averages and totals of summarized data, for example, for each plan and AuthID. BACCTLT provides data for individual threads and therefore provides only totals.

\[ \text{Note} \]

The field names in the accounting reports may vary slightly from the field names in BACCTDR due to formatting constraints in each report.

The accounting reports consist of sections of information about a particular activity, such as buffer pool activity and locking activity.

\[ \text{Related Information} \]

- “Accounting reports” on page 481
- “Accounting summary—long report (BACCTDR)” on page 484
- “Accounting detail trace—long report (BACCTLT)” on page 490

Accelerator activity

This topic describes the accelerator activity section of the Accounting detail trace—long report (BACCTLT).
Table 45 on page 176 describes the fields in the accelerator activity section.

Table 45: Accelerator activity field definitions

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT ID</td>
<td>Accelerator product ID</td>
</tr>
<tr>
<td>SERVER NAME</td>
<td>Accelerator server ID</td>
</tr>
<tr>
<td>OCCURRENCES</td>
<td>Count of accelerator product IDs</td>
</tr>
<tr>
<td>CONNECTS</td>
<td>Number of accelerator connects</td>
</tr>
<tr>
<td>REQUESTS</td>
<td>Number of accelerator requests</td>
</tr>
<tr>
<td>TIMED OUT</td>
<td>Number of timed out requests</td>
</tr>
<tr>
<td>FAILED</td>
<td>Number of failed requests</td>
</tr>
<tr>
<td>SENT</td>
<td>Number of bytes sent to the accelerator</td>
</tr>
<tr>
<td>MESSAGES</td>
<td>Number of messages sent to the accelerator</td>
</tr>
<tr>
<td>BLOCKS</td>
<td>Number of blocks sent to the accelerator</td>
</tr>
<tr>
<td>ROWS</td>
<td>Number of rows sent to the accelerator</td>
</tr>
<tr>
<td>RECEIVED</td>
<td>Number of bytes returned from the accelerator</td>
</tr>
<tr>
<td>MESSAGES</td>
<td>Number of messages returned from the accelerator</td>
</tr>
<tr>
<td>BLOCKS</td>
<td>Number of blocks returned from the accelerator</td>
</tr>
<tr>
<td>ROWS</td>
<td>Number of rows returned from the accelerator</td>
</tr>
<tr>
<td>ELAPSED TIME</td>
<td>Accelerator services TCP/IP elapsed time</td>
</tr>
<tr>
<td>CPU TIME</td>
<td>Accelerator services TCP/IP CPU time</td>
</tr>
<tr>
<td>WAIT TIME</td>
<td>Overall accelerator wait time</td>
</tr>
<tr>
<td>TIMES: ELAPSED TIME</td>
<td>Accelerator services TCP/IP elapsed time</td>
</tr>
<tr>
<td>TIMES: ACCUM ACCEL</td>
<td>Overall accelerator elapsed time</td>
</tr>
<tr>
<td>TIMES: CPU TIME</td>
<td>Accelerator services TCP/IP CPU time</td>
</tr>
<tr>
<td>TIMES: ACCUM ACCEL</td>
<td>Overall accelerator CPU time</td>
</tr>
<tr>
<td>TIMES: WAIT TIME</td>
<td>Overall accelerator wait time</td>
</tr>
</tbody>
</table>

176 MainView for DB2 Performance Reporter User Guide
## Accelerator modeling activity

This topic describes the accelerator modeling activity section of the Accounting detail trace—long report (BACCTLT).

### Figure 32: Accelerator modeling activity section

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCUMULATED ELAPSED TIME SPENT PROCESSING SQL IN DB2</td>
<td>Accumulated elapsed time that DB2 spent processing SQL that might be eligible for execution on an accelerator</td>
</tr>
<tr>
<td>ACCUMULATED CPU TIME SPENT PROCESSING SQL IN DB2</td>
<td>Accumulated CPU time that DB2 spent processing SQL that might be eligible for execution on an accelerator</td>
</tr>
<tr>
<td>ACCUMULATED CPU TIME ON AN IBM SPECIALTY ENGINE PROCESSING SQL IN DB2</td>
<td>Accumulated CPU time that DB2 spent processing SQL on an IBM speciality engine, when that SQL was eligible for processing on an accelerator</td>
</tr>
</tbody>
</table>

Table 45 on page 176 describes the fields in the accelerator modeling activity section.

### Table 46: Accelerator modeling activity field definitions

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCUMULATED ELAPSED TIME SPENT PROCESSING SQL IN DB2</td>
<td>Accumulated elapsed time that DB2 spent processing SQL that might be eligible for execution on an accelerator</td>
</tr>
<tr>
<td>ACCUMULATED CPU TIME SPENT PROCESSING SQL IN DB2</td>
<td>Accumulated CPU time that DB2 spent processing SQL that might be eligible for execution on an accelerator</td>
</tr>
<tr>
<td>ACCUMULATED CPU TIME ON AN IBM SPECIALTY ENGINE PROCESSING SQL IN DB2</td>
<td>Accumulated CPU time that DB2 spent processing SQL on an IBM speciality engine, when that SQL was eligible for processing on an accelerator</td>
</tr>
</tbody>
</table>

## Application termination

This topic describes the Application termination section of the Accounting summary—long report (BACCTDR).
The termination condition for an individual thread is shown in the Highlights section of the Accounting detail trace—long report (BACCTLT).

Table 47 on page 178 describes the fields in the Application termination section.

Table 47: Application termination field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW USER</td>
<td>Number of normal terminations due to a new user (either the authorization ID changed or a signon with the same authorization ID (normal) occurred</td>
</tr>
<tr>
<td>DEALLOCATION</td>
<td>Number of normal terminations due to deallocation, which is a normal program termination</td>
</tr>
<tr>
<td>APPL PROGRAM END</td>
<td>Number of normal terminations due to an application program end: the application program terminated without using DB2 protocols to end its connection to DB2</td>
</tr>
<tr>
<td>RESIGNON</td>
<td>Number of normal terminations due to a resignon</td>
</tr>
<tr>
<td>DBAT INACTIVE</td>
<td>Number of normal terminations due to a DBAT becoming inactive</td>
</tr>
<tr>
<td>RRS COMMIT</td>
<td>Number of times a DB2 application using the RRS attach facility with accounting interval specified as COMMIT successfully committed a logical unit of work</td>
</tr>
<tr>
<td>DDF TYPE 2 INACTIVE</td>
<td>Number of times a DDF type 2 thread became inactive</td>
</tr>
<tr>
<td>END USER THRESH DDF/RRSAF</td>
<td>Number of times the threshold was reached for number of end user occurrences when data was accumulated by end user for DDF or RRSAF</td>
</tr>
<tr>
<td>BLK STOR THRESH DDF/RRSAF</td>
<td>Number of times the DB2 storage threshold for Accounting blocks was reached for data accumulated by end user for DDF or RRSAF</td>
</tr>
<tr>
<td>STALENESS THRESH DDF/RRSAF</td>
<td>Number of times the threshold for staleness was exceeded when data was accumulated by end user for DDF or RRSAF</td>
</tr>
<tr>
<td>ABNORMAL TERMINATION TOTALS:</td>
<td></td>
</tr>
<tr>
<td>APPLICATION ABEND</td>
<td>Number of abnormal terminations due to an application program abend</td>
</tr>
<tr>
<td>END OF MEMORY</td>
<td>Number of abnormal terminations due to an end of memory</td>
</tr>
<tr>
<td>RESOLVE INDOUBT</td>
<td>Number of abnormal terminations due to a resolve indoubt</td>
</tr>
<tr>
<td>STOP FORCE</td>
<td>Number of abnormal terminations due to a stop force</td>
</tr>
</tbody>
</table>
Average service units

This topic describes the Average service units section of the Accounting summary—long report (BACCTDR).

**Figure 34: Average service units section**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>CLASS 1</th>
<th>CLASS 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Number of class 1 CPU service unit time in an application</td>
<td>1238.28</td>
<td>1042.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGENT</td>
<td>(QWACEJST - QWACBJST + QWACSPCP) / Count of Threads * (16,000,000 / QWACIUCV)</td>
<td>1238.28</td>
<td>1042.92</td>
</tr>
<tr>
<td>NONNESTED</td>
<td>Number of class 1 TCB service units accumulated in nonnested activity</td>
<td>1238.28</td>
<td>1042.92</td>
</tr>
<tr>
<td></td>
<td>((QWACEJST - QWACBJST + QWACSPCP) / CNT OF THDS) - ((QWACEJST - QWACBJST) / CNT OF THDS) - (QWACSPCP / CNT OF THDS + QWACUDCP / CNT OF THDS) + (QWACTRTT / CNT OF THDS) * (16,000,000 / QWACIUCV)</td>
<td>1238.28</td>
<td>1042.92</td>
</tr>
<tr>
<td>STPROC</td>
<td>Number of class 1 TCB service units accumulated in an application for stored procedures</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>((QWACSPCP / CNT OF THDS)* (16,000,000 / QWACIUCV)</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>Number of class 1 UDF service unit time in an application</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TRIGGER</td>
<td>Number of class 1 Trigger service unit time in an application</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>Number of class 1 PAR.TASKS service unit time in an application</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 48 on page 179 describes the fields in the Average service units section.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>CLASS 1</th>
<th>CLASS 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Number of class 2 service unit time in DB2</td>
<td>1042.92</td>
<td>1042.92</td>
</tr>
<tr>
<td></td>
<td>((QWACAJST + QWACSPTT + QWACTRTT + QWACUDTT) / (CNT OF THDS) * (16,000,000 / QWACIUCV))</td>
<td>1042.92</td>
<td>1042.92</td>
</tr>
<tr>
<td>TCB</td>
<td>Number of class 2 TCB service units in an application</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>((QWACAJST / CNT OF THDS) * (16,000,000 / QWACIUCV))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NONNESTED</td>
<td>Number of class 2 service units accumulated in nonnested activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>((QWACAJST + QWACSPTT + QWACTRTT + QWACUDTT / CNT OF THDS) - (QWACAJST / CNT OF THDS) + QWACUDTT / CNT OF THDS) + QWACTRTT / CNT OF THDS) * (16,000,000 QWACIUCV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STPROC</td>
<td>Number of class 2 service units accumulated in DB2 for stored procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(QWACSPTT / CNT OF THDS) / (16,000,000 / QWACIUCV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLASS 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLASS 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UDF</td>
<td>Number of class 1 TCB service units accumulated in an application for UDF ((\text{QWACUDCP} / \text{CNT OF THDS}) * (16,000,000 / \text{QWACIUCV}))</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of class 2 TCB service units accumulated in DB2 for UDF ((\text{QWACUDTT} / \text{CNT OF THDS}) / (16,000,000 / \text{QWACIUCV}))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIGGER</td>
<td>Number of class 1 TCB service units accumulated in an application used while executing under control of a trigger ((\text{QWACTRTT} / \text{CNT OF THDS}) * (16,000,000 / \text{QWACIUCV}))</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of TCB service units accumulated in DB2 used while executing under control of a trigger ((\text{QWACTRTT} / \text{CNT OF THDS}) / (16,000,000 / \text{QWACIUCV}))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAR. TASKS</td>
<td>Number of class 1 CPU service units of the parallel tasks running in an application ((\text{QWACESDT} - \text{QWACBJST}) / \text{CNT OF THDS}) * (16,000,000 / \text{QWACIUCV}))</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of class 2 CPU service units of the parallel tasks running in DB2 ((\text{QWACAJST} / \text{CNT OF THDS}) / (16,000,000 / \text{QWACIUCV}))</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Buffer pool activity**

This topic describes the Buffer pool activity section of the Accounting summary—long report (BACCTDR).

**Figure 35: Buffer pool activity section**

<table>
<thead>
<tr>
<th>Buffer Pool Totals</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPOOL HIT RATIO (%)</td>
<td>76.25</td>
<td></td>
</tr>
<tr>
<td>GETPAGES</td>
<td>762.00</td>
<td>1524</td>
</tr>
<tr>
<td>BUFFER UPDATES</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SYNCHRONOUS WRITE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SYNCHRONOUS READ</td>
<td>101.50</td>
<td>203</td>
</tr>
<tr>
<td>SEQ PREFETCH REQUESTS</td>
<td>1.00</td>
<td>2</td>
</tr>
<tr>
<td>LIST PREFETCH REQS</td>
<td>11.00</td>
<td>22</td>
</tr>
<tr>
<td>DYNAMIC PREFETCH REQS</td>
<td>16.00</td>
<td>32</td>
</tr>
<tr>
<td>PAGES READ ASYNCHR</td>
<td>79.50</td>
<td>159</td>
</tr>
</tbody>
</table>

Table 49 on page 181 describes the fields in the Buffer pool activity section.
### Table 49: Buffer pool activity field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| BPOOL HIT RATIO(%)     | Buffer pool hit ratio with prefetch, calculated as $(\text{total Pages} - \text{total I/O})/\text{total Pages} \times 100.0$  
Total Pages is the number of getpage requests (QBACGET). Total I/O is the sum of  
Synchronous read I/Os (QBACRIO)  
Asynchronous pages read by sequential prefetch (QBACSIO) |
| GETPAGES               | Number of getpage requests (QBACGET)  
In the DB2 Accounting Overview Report and the DB2 Accounting Buffer Pool Report, this value is the average number of getpage requests per plan execution. This is a count of the number of requests for a data page (successful and unsuccessful) from DB2’s data manager to the buffer manager for normal DB2 processing. DB2 looks first in a central storage virtual buffer pool, then to an expanded storage hiperpool, if present. If not present, DB2 reads the page from DASD. In parallel query processing, the field counts only the number of successful requests.  
**Tuning Tip**: The general guideline for tuning any query is to attempt to find the page in memory if possible, either by maintaining large pools to improve the hit ratio for random reads or by use of sequential prefetch, dynamic detection, or list prefetch to improve sequential reads. The higher the ratio of pages found in memory, the less I/O the query costs and the faster the query will run. |
| BUFFER UPDATES         | Number of page updates (QBACSWS)  
In the DB2 Accounting Overview Report, this value is the average number of pages updated per plan execution. In the DB2 Accounting Buffer Pool Report, it is the average number of times a buffer update occurs for the agent (QBACSWS/#OCCUR). This counter is incremented every time a page is updated and ready to be externalized to DASD. If the same page is updated twice, for example, the count is incremented by 2.  
This count includes not only updates to data pages but also workfile pages, so if a sort is used, this number can be higher than expected. DB2 keeps committed pages in a buffer pool until a system checkpoint occurs or the deferred write threshold is encountered. DB2 attempts to write data to the page set asynchronously. The number of pages used in prefetch is governed by the size of the buffer pool. Prefetch can be 8, 16, or 32 pages. |
| SYNCHRONOUS WRITE      | Number of immediate write I/Os (QBACIMW)  
In the DB2 Accounting Buffer Pool Report, this value is the average number of immediate write I/Os. This counter is the number of synchronous write I/Os. This situation only occurs when the immediate write threshold of 97.5% of pages in use in a buffer pool is reached. This situation is extremely resource intensive and highly undesirable. To avoid reaching this threshold, the VPSIZE (virtual pool size) should be tuned so this never occurs. |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNCHRONOUS READ</td>
<td>Number of synchronous read I/Os (QBACRIO)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Overview Report and the DB2 Accounting Buffer Pool Report, this value is the</td>
</tr>
<tr>
<td></td>
<td>average number of synchronous read I/Os issued per plan execution. This counter is incremented every</td>
</tr>
<tr>
<td></td>
<td>time DB2 cannot find a page in memory and must issue a random I/O to DASD to retrieve it.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The overall goal in DB2 tuning is to reduce the number of synchronous I/Os by</td>
</tr>
<tr>
<td></td>
<td>having needed pages in memory, either by caching or use of prefetch. The thread waits for synchronous</td>
</tr>
<tr>
<td></td>
<td>I/O activity to be completed before proceeding. This wait time is measured with accounting class 3</td>
</tr>
<tr>
<td></td>
<td>and is reflected in the SYNC I/O field for threads and packages.</td>
</tr>
<tr>
<td>SEQ PREFETCH REQ5</td>
<td>Number of sequential prefetch requests (QBACSEQ)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Overview Report and the DB2 Accounting Buffer Pool Report, this value is the</td>
</tr>
<tr>
<td></td>
<td>average number of sequential prefetch requests issued per plan execution. This counter is incremented</td>
</tr>
<tr>
<td></td>
<td>each time DB2 issues a sequential prefetch request. Normally DB2 attempts to do this read-ahead</td>
</tr>
<tr>
<td></td>
<td>buffering by reading up to 32 pages per prefetch request and up to 64 pages per utility prefetch.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> A buffer pool must be at least 1000 pages to get the full benefit of sequential</td>
</tr>
<tr>
<td></td>
<td>prefetch. Also, a sufficient number of sequential pages must be allowed in the buffer pool assigned</td>
</tr>
<tr>
<td></td>
<td>to the accessed table (VPSEQT parameter). Otherwise, the prefetch quantity may be reduced, or</td>
</tr>
<tr>
<td></td>
<td>prefetch disabled.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The following service units (SUs) have been converted from CPU times using the conversion</td>
</tr>
<tr>
<td></td>
<td>factor from QWACSUCV as follows: SU = CPU seconds x (16000000/conversion factor).</td>
</tr>
<tr>
<td>LIST PREFETCH REQ5</td>
<td>Number of list prefetch requests (QBACLPF)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Buffer Pool Report, this value is the average number of list prefetch requests.</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented each time DB2 reads index RIDs (Row IDs) in non-matching index scans,</td>
</tr>
<tr>
<td></td>
<td>multiple index access path selections, or several types of join access paths. List prefetch allows</td>
</tr>
<tr>
<td></td>
<td>DB2 to sort the index RIDs into data row order, thereby enabling prefetch in data sequence, a</td>
</tr>
<tr>
<td></td>
<td>process which eliminates data page reads and allows read-ahead buffering. The RIDs are sorted in the</td>
</tr>
<tr>
<td></td>
<td>RID pool.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> List prefetch is not chosen at BIND if DB2 determines that the resultant size of the</td>
</tr>
<tr>
<td></td>
<td>RID list would exceed 50% of the RID pool. At execution time, DB2 disables list prefetch if a single</td>
</tr>
<tr>
<td></td>
<td>index occupies more than 25% of the RID pool or the RID pool storage is exhausted. When list</td>
</tr>
<tr>
<td></td>
<td>prefetch is disabled, the query becomes a table space scan, which is highly undesirable. If it occurs</td>
</tr>
<tr>
<td></td>
<td>frequently, change the SQL to reduce the number of RIDs or increase the size of the RID pool.</td>
</tr>
<tr>
<td>DYNAMIC PREFETCH</td>
<td>Number of dynamic prefetch requests (QBACDPF)</td>
</tr>
<tr>
<td>REQ5</td>
<td></td>
</tr>
<tr>
<td>PAGES READ ASYNCHR</td>
<td>Number of asynchronous pages read by prefetch operations (QBACSIO)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Buffer Pool Report, this value is the average number of asynchronous pages</td>
</tr>
<tr>
<td></td>
<td>read by prefetch under the control of the agent.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Generally, unless the application is totally random, the higher the prefetch number,</td>
</tr>
<tr>
<td></td>
<td>the more likely it is that the data will be in memory when needed. The more successful that read-</td>
</tr>
<tr>
<td></td>
<td>ahead buffering is, the faster the application should perform.</td>
</tr>
</tbody>
</table>
Data capture

This topic describes the Data capture section of the Accounting summary—long report (BACCTDR).

**Figure 36: Data capture section**

<table>
<thead>
<tr>
<th>Description</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFI CALL</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>RECS CAPTURED</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>LOG REC READ</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>ROWS RETURNED</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>RECS RETURNED</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>DATA DESC RETD</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>TABLES RETURNED</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>DESCRIBES</td>
<td>0.00</td>
<td>N/P</td>
</tr>
</tbody>
</table>

Table 50 on page 183 describes the fields in the Data capture section.

**Table 50: Data capture field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFI CALL</td>
<td>Number of entries and exits from IFI events (QIFAANIF)</td>
</tr>
<tr>
<td></td>
<td>This value is the number of times DB2 processed trace data records from the IFI. This information is obtained only if accounting class 5 is active.</td>
</tr>
<tr>
<td>RECS CAPTURED</td>
<td>Number of log records written for data capture (QIFAANRC)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when log records are written to IFCID 185. It includes only those log records that can be retrieved with an IFI READS call for IFCID 185 (Data Capture).</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> These records are gathered by ALTERing a table space to CAPTURE YES.</td>
</tr>
<tr>
<td>LOG REC READ</td>
<td>Number of log reads performed for data capture (QIFAANLR)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the DB2 log has to be read for an IFI READS request to process data capture changes in IFCID 185. Data Capture logs the entire row of before and after change data. This number represents how many times the log had to be read to provide this data for processing IFI READS requests.</td>
</tr>
<tr>
<td>ROWS RETURNED</td>
<td>Number of data rows returned in IFCID 185 (QIFAANDR)</td>
</tr>
<tr>
<td></td>
<td>Before and after images of each row are returned to the user. The rows are mapped by macro QW0185DR.</td>
</tr>
<tr>
<td>RECS RETURNED</td>
<td>Number of data capture records returned to caller (QIFAANRR)</td>
</tr>
<tr>
<td></td>
<td>The counter is incremented when IFCID 185 is successfully returned to the caller.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Data capture records are used for remote hot site recovery and sophisticated audit software.</td>
</tr>
<tr>
<td>DATA DESC RETD</td>
<td>Number of data capture descriptions returned (QIFAANDD)</td>
</tr>
<tr>
<td></td>
<td>This value reflects the number of catalog entries that are described in IFCID 185 to allow parsing of the row data. The DB2 catalog must be accessed to obtain this information. The fields are mapped in QW0185DD.</td>
</tr>
</tbody>
</table>

Chapter 6 Report field definitions 183
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLES RETURNED</td>
<td>Number of tables returned to data capture caller (QIFAANTB)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented for each table described in a data capture IFCID 185 trace record. This requires a catalog lookup. The data is used in decoding changed information in the data capture exit.</td>
</tr>
<tr>
<td>DESCRIBES</td>
<td>Number of describes done for data capture (QIFAANMB)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 must go to the catalog to describe a row for processing READS requests for IFCID 185. This facility is available for the data capture exit which is used for fast remote site disaster recovery or sophisticated audit techniques.</td>
</tr>
</tbody>
</table>

**Data sharing**

This topic describes the Data sharing section of the Accounting summary—long report (BACCTDR).

**Figure 37: Data sharing section**

<table>
<thead>
<tr>
<th>DATA SHARING</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL CONT RATE(%)</td>
<td>0.00</td>
<td>N/A</td>
</tr>
<tr>
<td>FALSE CONT RATE(%)</td>
<td>0.00</td>
<td>N/A</td>
</tr>
<tr>
<td>L-LOCK XES RATE(%)</td>
<td>0.00</td>
<td>N/A</td>
</tr>
<tr>
<td>LOCK REQ - PLOCKS</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>UNLOCK REQ - PLOCKS</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>CHANGE REQ - PLOCKS</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>LOCK REQ - XES</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>UNLOCK REQ - XES</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>CHANGE REQ - XES</td>
<td>0.00</td>
<td>N/A</td>
</tr>
<tr>
<td>SUSPENDS - IRLM</td>
<td>0.00</td>
<td>N/A</td>
</tr>
<tr>
<td>SUSPENDS - XES</td>
<td>0.00</td>
<td>N/A</td>
</tr>
<tr>
<td>SUSPENDS - FALSE</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>INCOMP LOCK</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>NOTIFY SENT</td>
<td>0.00</td>
<td>N/P</td>
</tr>
<tr>
<td>L-LOCK RATE(%)</td>
<td>0.00</td>
<td>N/P</td>
</tr>
</tbody>
</table>

Table 51 on page 185 describes the fields in the Data sharing section.
### Table 51: Data sharing field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| GLOBAL CONT RATE(%)          | Percentage of global lock contentions  
This value is calculated as Global Suspends/total Global Locks x 100.0  
Global Suspends is the total number of global lock contentions (QTGAIGLO + QTGASGLO + QTGAFLSE).  
Total Global Locks is the sum of:  
- Lock requests (QTGALSLM)  
- Change requests (QTGACSLM)  
- Unlock requests (QTGAUSLM)  
- Global lock contentions (QTGAIGLO + QTGASGLO + QTGAFLSE) |
| FALSE CONT RATE(%)           | Percentage of global lock false contentions  
This value is calculated as False Contentions / Global Suspends x 100.0  
False Contentions is the total number of global lock suspensions due to false contention (QTGAFLSE).  
Global Suspends is the total number of global lock contentions (QTGAIGLO + QTGASGLO + QTGAFLSE). |
| L—LOCK XES RATE(%)           | Number of lock requests propagated to z/OS XES (QTGALSLM)  
LOCK REQ—PLOCKS              | Number of lock requests for P-locks (QTGALPLK)  
Physical locks (P-locks) are acquired in the DB2 data sharing environment at the data set level to allow DB2 to determine whether an object is of intersystem interest. Concurrency is still managed as before with transaction (or logical) locks (L-locks). A P-lock is acquired for the first transaction that accesses an object (table space, index space, partition) but it is owned by the subsystem. Page P-locks are used for row-level locking. P-locks never cause timeouts, as the lock mode can be negotiated. Intersystem interest occurs only when at least one DB2 has update interest and one or more others have read interest. |
| UNLOCK REQ—PLOCKS            | Number of unlock requests for P-locks (QTGAUPLK)  
This number represents the number of IRLM unlock requests in a data sharing environment.  
CHANGE REQ—PLOCKS             | Number of change requests for P-locks (QTGACPLK)  
This counter is incremented when a P-lock has been established and the IRLM associated with this DB2 determines that the nature of a that lock must be changed for page sets which are of intersystem interest. The number of P-lock changes reflects the changing status of page sets as access modes change and as the lock state is negotiated between DB2s.  
LOCK REQ—XES                  | Number of lock requests propagated to MVS XES synchronously (QTGALSLM)  
This number is incremented for all data sharing locks when a request for a lock on an object of DB2 intersystem interest is sent to MVS Cross-System Services. Both L-locks and P-locks are included. The count is not incremented if a suspension occurs. This number reflects the global lock activity. |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNLOCK REQ—XES</td>
<td>Number of unlock requests propagated to MVS XES synchronously (QTGAUSLM) This number is incremented for all data sharing locks when an unlock request for an object of DB2 intersystem interest is sent to MVS Cross-System Services. Both L-locks and P-locks are included. The count is not incremented if a suspension occurs. This number reflects the number of resources propagated for unlocks, not just the number of unlock requests, which may be generic for a group of resources.</td>
</tr>
<tr>
<td>CHANGE REQ—XES</td>
<td>Number of change requests propagated to MVS XES synchronously (QTGACSLM) This number is incremented for all data sharing locks when a change request for a lock on an object of DB2 intersystem interest is sent to MVS Cross-System Services. Both L-locks and P-locks are included. The count is not incremented if a suspension occurs. This number reflects the number of change requests for locks of intersystem interest.</td>
</tr>
<tr>
<td>SUSPENDS—IRLM</td>
<td>Number of global IRLM suspensions (QTGAIGLO) This number is incremented when an incompatible lock is requested on an object (page set, page or row) in a data sharing environment that is being held by another system. For a complete picture of global contention, all three global suspension counts must be considered. This counter is a measure of intersystem contention. All locks of intrasystem contention are resolved prior to the IRLM checking for intersystem contention. This number is the number of true waits for another thread on a different MVS that has an incompatible lock type to the requester. Global contention requires intersystem communication to resolve the conflict.</td>
</tr>
<tr>
<td>SUSPENDS—XES</td>
<td>Number of global XES suspensions (QTGASGLO) This counter is a measure of MVS XES global resource contention. The MVS XES lock states were in conflict but IRLM lock states were not.</td>
</tr>
<tr>
<td>SUSPENDS—FALSE</td>
<td>Number of false global suspensions (QTGAFLSE) This counter is incremented every time MVS Cross-System Services detects contention on the resource hash class but not on the resource itself. <strong>Tuning Tip:</strong> MVS Cross-System Services uses a hash table for efficient determination of whether a resource is locked. This hash table points to a number of synonyms. When contention exists on the hash class but not on the actual object, this condition is false contention. The more resources declared to be of intersystem interest, the more chances there are of this condition occurring. The CF lock structure may be too small.</td>
</tr>
<tr>
<td>INCOMP LOCK</td>
<td>Number of global requests denied because of incompatible retained lock (QTGADRTA) This number is incremented every time Global Lock Services denies a lock request because an incompatible lock type has been retained for the requested resources. This number reflects the instances in which intersystem access to a page or row cannot be obtained because another thread on another system had access to the resource requested but the other system failed. The Coupling Facility retains locks until the other system has come up to complete the unit of work.</td>
</tr>
<tr>
<td>NOTIFY SENT</td>
<td>Number of notify messages sent (QTGANTFY) This number represents the number of messages passed to the coupling facility; for example, to notify other members that DBDs have been changed due to CREATE, ALTER, or DROP statements. This value is the outbound traffic to the coupling facility in a data sharing complex.</td>
</tr>
</tbody>
</table>
### Drain/Claim

This topic describes the Drain and claim section of the Accounting summary—long report (BACCTDR).

**Figure 38: Drain and claim section**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAIN/CLAIM</td>
<td>AVERAGE TOTAL</td>
</tr>
<tr>
<td>DRAIN REQ</td>
<td>2.00 2</td>
</tr>
<tr>
<td>DRAIN FAIL</td>
<td>0.00 0</td>
</tr>
<tr>
<td>CLAIM REQ</td>
<td>124.00 124</td>
</tr>
<tr>
<td>CLAIM FAIL</td>
<td>0.00 0</td>
</tr>
</tbody>
</table>

Table 52 on page 187 describes the fields in the drain and claim section.

**Table 52: Drain and claim field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAIN REQ</td>
<td>Number of drain requests (QTXADRNO)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented each time a utility or command requests a serialization against a page set resource.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This counter is of significance in determining the amount of utility and command activity regarding requests for serial drain access to a resource.</td>
</tr>
<tr>
<td>DRAIN FAIL</td>
<td>Number of unsuccessful drain requests (QTXADRUN)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a potential drainer (utility or command) cannot obtain use of a page set because the claim count has not dropped to zero within the utility timeout value set in IRLMWRT of DSNZPARMs.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number is of significance in determining the number of unsuccessful utility and command processes due to user activity on the resource.</td>
</tr>
<tr>
<td>CLAIM REQ</td>
<td>Number of claim requests (QTXACLNO)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time a user executes an SQL statement that increments the use count of a table space, partition, or index space.</td>
</tr>
<tr>
<td>CLAIM FAIL</td>
<td>Number of unsuccessful claim requests (QTXACLUN)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time a user issues a request for a claim to an SQL resource but cannot acquire one, usually because a utility or command DRAIN is on the object being sought.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number is of some significance in determining contention between SQL and other types of utilities or commands.</td>
</tr>
</tbody>
</table>
Dynamic SQL (optimization)

This topic describes the Dynamic SQL (optimization) section of the Accounting summary—long report (BACCTDR).

**Figure 39: Dynamic SQL (optimization)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>REOPTIMIZATION</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PREP_STMT_MATCH</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PREP_STMT_NO_MATCH</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>IMPLCIT_PREPARES</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PREP_FROM_CACHE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>CACHE_LIMIT_EXCEED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PREP_STMT_PURGED</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 53 on page 188 describes the fields in the Dynamic SQL (optimization) section.

**Table 53: Dynamic SQL (optimization) field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REOPTIMIZATION</td>
<td>Number of times reoptimization occurred for a query (QXSTREOP)</td>
</tr>
<tr>
<td>PREP_STMT_MATCH</td>
<td>Number of times DB2 satisfied a PREPARE request by making a copy of a statement in the prepared statement cache (QXSTFND)</td>
</tr>
<tr>
<td>PREP_STMT_NO_MATCH</td>
<td>Number of times DB2 searched the prepared statement cache but could not find a suitable prepared statement (QXSTNFND)</td>
</tr>
<tr>
<td>IMPLCIT_PREPARES</td>
<td>Number of times DB2 did an implicit PREPARE for a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache did not contain a valid copy of the prepared statement (QXSTIPRP)</td>
</tr>
<tr>
<td>PREP_FROM_CACHE</td>
<td>Number of times DB2 did not prepare a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache contained a valid copy of the prepared statement (QXSTNPRP)</td>
</tr>
<tr>
<td>CACHE_LIMIT_EXCEED</td>
<td>Number of times DB2 discarded a prepared statement from the prepared statement cache because the number of prepared statements in the cache exceeded the value of subsystem parameter MAXKEEPD (QXSTDEXP)</td>
</tr>
<tr>
<td>PREP_STMT_PURGED</td>
<td>Number of times DB2 discarded a prepared statement from the prepared statement cache because a program executed a DROP, ALTER, or REVOKE statement against a dependent object (QXSTDINV)</td>
</tr>
</tbody>
</table>

Global contention

This topic describes the Global contention section of the Accounting summary—long report (BACCTDR).
Table 54 on page 189 describes the fields in the Global contention section.

### Table 54: Global contention field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L-LOCKS</strong></td>
<td>Accumulated global contention wait time for all L-Locks</td>
</tr>
<tr>
<td><strong>PARENT</strong></td>
<td>Number of global contention waits for all L-Locks</td>
</tr>
<tr>
<td><strong>CHILD</strong></td>
<td>Accumulated global contention wait time for child L-Locks</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>Number of global contention wait events for other L-Locks</td>
</tr>
<tr>
<td><strong>P-LOCKS</strong></td>
<td>Number of global contention waits for all P-Locks</td>
</tr>
<tr>
<td><strong>PAGESET PARTITION</strong></td>
<td>Accumulated global contention time for pageset and partition P-Locks</td>
</tr>
<tr>
<td><strong>PAGE</strong></td>
<td>Accumulated global contention wait time for page P-Locks</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>Accumulated global contention wait time for other P-Locks</td>
</tr>
<tr>
<td><strong>P-LOCKS</strong></td>
<td>Number of global contention waits for all P-Locks</td>
</tr>
<tr>
<td><strong>PAGESET PARTITION</strong></td>
<td>Number of global contention waits for pageset and partition P-Locks</td>
</tr>
<tr>
<td><strong>PAGE</strong></td>
<td>Number of global contention waits for page P-Locks</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>Number of global contention waits for other P-Locks</td>
</tr>
</tbody>
</table>

### Group buffer pool

This topic describes the Group buffer pool section of the Accounting summary—long report (BACCTDR).

**Figure 41: Group buffer pool**

<table>
<thead>
<tr>
<th>Group BP Totals</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
</table>
Table 55 on page 190 describes the fields in the Group buffer pool section.

### Table 55: Group buffer pool field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GETPAGES FOR GBP PAGES</td>
<td>Number of getpages for global buffer pool dependent pages (QBGAGG)</td>
</tr>
<tr>
<td>READ(XI) DATA RETURNED</td>
<td>Number of synchronous coupling facility reads for invalid buffer A data sharing coupling facility synchronous read was issued because a local virtual buffer pool or hiperpool had a page marked as invalid but the page existed in the group buffer pool (QBGAXD). This situation occurs normally in a data sharing complex in which data must be shared. The correct data is refreshed from the group buffer pool.</td>
</tr>
<tr>
<td>READ(XI) NO DATA RET</td>
<td>Number of synchronous coupling facility reads for invalid buffer (QBGAXR + QBGAXN) A data sharing coupling facility synchronous read was issued because a local virtual buffer pool or hiperpool had a page marked as invalid but no data was returned. Data is not returned from the group buffer pool, and a directory entry is created if it does not already exist. This situation means that another DB2 in the group has R/W interest in the page set or partition.</td>
</tr>
<tr>
<td>READ(NF) DATA RETURNED</td>
<td>Number of synchronous coupling facility reads for buffer not found A data sharing coupling facility synchronous read was issued because a page was not found in the local virtual buffer pool or hiperpool but the page existed in the group buffer pool (QBGAMD). This situation occurs normally in a data sharing complex in which data must be shared. The correct data is refreshed from the group buffer pool.</td>
</tr>
<tr>
<td>READ(NF) NO DATA RET</td>
<td>Number of synchronous coupling facility reads for buffer not found (QBGAMR + QBGAMN) A data sharing coupling facility synchronous read was issued because a page could not be found in a local virtual buffer pool or hiperpool and no data was returned. Data is not returned from the group buffer pool, and a directory entry is created if it does not already exist. This situation means that another DB2 in the group has R/W interest in the page set or partition.</td>
</tr>
<tr>
<td>PREFETCH PAGES READ</td>
<td>Total number of coupling facility read requests required because the requested page was not found in the buffer pool (QBGAMN) Data is not returned from the group buffer pool, and no directory entry is created for this page. When no other DB2 in the group has R/W interest in the page set or partition, the process of creating the directory entry can be avoided.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CLEAN PAGES WRITTEN</td>
<td>Number of clean pages written to the group buffer pool (QBGAWC). This process is done only when GBPCACHE is set to ALL. <strong>Tuning Tip:</strong> This process can be expensive but does post the group buffer pool with clean pages and may be useful for small tables with high intersystem read interest to reduce contention.</td>
</tr>
<tr>
<td>CHANGED PAGES WRITTEN</td>
<td>Number of changed pages written to the group buffer pool as a result of write and register (WAR) requests, or write and register multiple (WARM) requests (QBGASW). A changed page was written to the group buffer pool. Updated pages must be written to the coupling facility when the object is of intersystem interest so other DB2s can refresh their invalidated buffers. Only changed pages are written when GBPCACHE is set to CHANGE.</td>
</tr>
<tr>
<td>UNREGISTER PAGE REQS</td>
<td>Number of coupling facility requests to unregister interest to the GBP for a single page (QBGADG). This request is generally done as DB2 steals pages from the local buffer pool that belong to GBP-dependent page sets or partitions.</td>
</tr>
<tr>
<td>EXPLICIT X-INVALIDATES</td>
<td>Number of explicit cross-invalidations (QBGAEX)</td>
</tr>
<tr>
<td>WRT-AND-REG REQUESTS</td>
<td>Number of write and register requests (QBGAWS)</td>
</tr>
<tr>
<td>PAGE PLOCK-REQS</td>
<td>Number of page P-lock lock requests for space map, data, and index leaf pages (QBGAP1+QBGAP2+QBGAP3)</td>
</tr>
<tr>
<td>SPACE MAP PAGES</td>
<td>Number of page P-lock suspensions for space-map pages (QBGAP1 or QBGAS1)</td>
</tr>
<tr>
<td>DATA PAGES</td>
<td>Number of page P-lock lock requests for data pages</td>
</tr>
<tr>
<td>INDEX LEAF PAGES</td>
<td>Number of page P-lock lock requests for index-leaf pages</td>
</tr>
<tr>
<td>PAGE P-LOCK UNLOCKS</td>
<td>Number of page P-lock unlock requests (QBGAU1)</td>
</tr>
<tr>
<td>PAGE P-LOCK SUSP</td>
<td>Number of page P-lock lock suspensions for space map, data, and index leaf pages (QBGA1+QBGA2+QBGA3)</td>
</tr>
<tr>
<td>SPACE MAP PAGES</td>
<td>Number of page P-lock lock requests for space-map pages</td>
</tr>
<tr>
<td>DATA PAGES</td>
<td>Number of page P-lock lock suspensions for data pages (QBGAP2 or QBGAS2)</td>
</tr>
<tr>
<td>INDEX LEAF PAGES</td>
<td>Number of page P-lock lock suspensions for index-leaf pages (QBGAP3 or QBGAP3)</td>
</tr>
<tr>
<td>W-A-R-MULTI-REQS</td>
<td>Number of write and register multiple requests (QBGAWM)</td>
</tr>
</tbody>
</table>

**Highlights**

This topic describes the Highlights section of the Accounting summary—long report (BACCTDR).

**Figure 42: Highlights**
Table 56 on page 192 describes the fields in the highlights section.

### Table 56: Highlights field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#OCCURS</td>
<td>Number of times the plan was executed or number of plan executions for the user. In the DB2 Accounting Package Report, this value is the number of accounting records with accounting data for this package.</td>
</tr>
<tr>
<td>#ALLIED</td>
<td>Number of allied distributed threads executed</td>
</tr>
<tr>
<td>#I/OPARALLELISM</td>
<td>Number of accounting records that indicated that I/O parallelism was used by at least one SQL statement and query CP and Sysplex query parallelism was not used by any SQL statement</td>
</tr>
<tr>
<td>#INCRBIND</td>
<td>Number of incremental BINDs performed excluding prepares (QXINCRB). This counter is incremented every time a plan is run that was bound with the VALIDATE(RUN) option. <strong>Tuning Tip:</strong> It is generally undesirable to bind a plan with the VALIDATE(RUN) option because all SQL statements must be rechecked for syntax, authority, and access path every time the plan is executed. VALIDATE(RUN) is required if the program is going to CREATE TABLES (for example, work tables) during the execution, or if testing is required on a piece of code for which the objects do not yet exist. Otherwise, VALIDATE(RUN) should be avoided, as the cost is nearly that of dynamic SQL.</td>
</tr>
<tr>
<td>#DBAT-DIST</td>
<td>Number of DBAT-distributed threads. For DDF or RRSAF threads, this is the number of accounting intervals rolled up in this record for the corresponding end user.</td>
</tr>
<tr>
<td>#NO PROGRAM DATA</td>
<td>Number of accounting records without package data</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>#NORMAL TERM</td>
<td>Number of times a thread terminated for normal reasons (QWACRINV):</td>
</tr>
<tr>
<td></td>
<td>■ NEW USER—A new user signed on.</td>
</tr>
<tr>
<td></td>
<td>■ RESIGNON—A partial sign on occurred where the authorization stayed the same. This situation occurs primarily when the TOKENE transaction in CICS is set to YES.</td>
</tr>
<tr>
<td></td>
<td>■ DBAT INACTIVE—A Database Access Thread (DBAT) became inactive. This situation occurs when an active DDF thread does a commit or rollback or when DB2 inactivates the thread because no work is received for the interval specified in IDLE THREAD TIMEOUT.</td>
</tr>
<tr>
<td></td>
<td>■ DEALLOCATION—The application informed DB2 that it has terminated.</td>
</tr>
<tr>
<td></td>
<td>■ RRSAF COMMIT—An application using the Recoverable Resource Manager Services Attachment Facility (RRSAF) specified a value of commit for the accounting interval parameter of the sign on function.</td>
</tr>
<tr>
<td></td>
<td>■ APPL PROG END—MVS informed DB2 that a thread has been terminated.</td>
</tr>
<tr>
<td></td>
<td>■ IFI READS—An Instrumentation Facility Interface synchronous read request terminated. This situation is usually invoked by monitor programs.</td>
</tr>
<tr>
<td>#ABNORMAL TERM</td>
<td>Number of times a thread terminated for abnormal reasons (QWACRINV):</td>
</tr>
<tr>
<td></td>
<td>■ APPL PROG ABEND—The application abended.</td>
</tr>
<tr>
<td></td>
<td>■ END-OF-MEMORY—The application was forced by command or system error and abended.</td>
</tr>
<tr>
<td></td>
<td>■ RESOLVE INDOUBT—A participant in a two-phase commit operation went through recovery processing (usually automatically or by operator command) and committed or rolled back work.</td>
</tr>
<tr>
<td></td>
<td>■ CANCEL/FORCE DB2—One of these commands was issued:</td>
</tr>
<tr>
<td></td>
<td>— STOP FORCE (from DB2)</td>
</tr>
<tr>
<td></td>
<td>— CANCEL DB2 (from MVS)</td>
</tr>
<tr>
<td></td>
<td>— FORCE DB2 (from MVS)</td>
</tr>
<tr>
<td>#CPU PARALLELISM</td>
<td>Number of originating accounting records where query CP and Sysplex query parallelism was used for at least one SQL statement I/O parallelism might have been used by other SQL statements.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>#COMMIT</td>
<td>Number of commits processed (QWACCOMM) In the DB2 Accounting SQL Report, this value is the average number of unit-of-work commits performed per plan execution. This value is a count of the number of commits taken for the thread. It includes both phase 2 and single-phase commits. <strong>Tuning Tip:</strong> This value is a useful number to observe while tracking a long job with a known commit frequency. The commits that are counted are successful.</td>
</tr>
<tr>
<td>#ROLLBACK</td>
<td>Number of rollbacks processed (QWACABRT) This number represents the total number of rollbacks including application abends, application explicit ROLLBACK, application deadlock, application CANCELed by operator or abended due to DB2 resource shortage.</td>
</tr>
<tr>
<td>#SVPT REQUEST</td>
<td>Number of named SAVEPOINTs set within a transaction (QWACSVPT)</td>
</tr>
<tr>
<td>#SVPT RELEASE</td>
<td>Number of RELEASE SAVEPOINT statements executed (QWACRLSV)</td>
</tr>
<tr>
<td>#SVPT ROLLBACK</td>
<td>Number of ROLLBACK TO SAVEPOINT statements executed (QWACRBSV)</td>
</tr>
<tr>
<td>MAX SQL CASC LEVL</td>
<td>Maximum level of nested SQL cascading due to triggers, user-defined functions, and stored procedures (QXCASCDP)</td>
</tr>
<tr>
<td>UPDATE/COMMIT</td>
<td>Sum of SQL INSERT, SQL UPDATE, and SQL DELETE statements executed (QXINSRT + QXUPDTE + QXDELET) / (QWACCOMM + QWACABRT)</td>
</tr>
<tr>
<td>SYNC I/O AVG.</td>
<td>Synchronous I/O suspension time per event (QWACAWTI + QWACAWLG + QWACARNE + QWACARLG) * (QWACARNE + QWACARLG)</td>
</tr>
</tbody>
</table>

### Locking

This topic describes the Locking section of the Accounting summary—long report (BACCTDR).

**Figure 43: Locking**

<table>
<thead>
<tr>
<th>LOCKING</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIMEOUTS</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>DEADLOCKS</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>ESCAL (SHR)</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>ESCAL (EXCL)</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>MAX LOCKS HELD</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>LOCK REQ</td>
<td>5242.00</td>
<td>5242</td>
</tr>
<tr>
<td>UNLOCK REQ</td>
<td>1144.00</td>
<td>1144</td>
</tr>
<tr>
<td>QUERY REQ</td>
<td>4.00</td>
<td>4</td>
</tr>
<tr>
<td>CHANGE REQ</td>
<td>1023.00</td>
<td>1023</td>
</tr>
<tr>
<td>OTHER REQ</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>LOCK SUSP</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>LATCH SUSP</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>OTHER SUSP</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL SUSP</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 57 on page 195 describes the fields in the Locking section.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TIMEOUT</strong></td>
<td>Number of lock timeouts (QTXATIM)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time a DB2 thread waits to get a resource longer than the timeout interval. It is specified with the DSNZPARM IRLMRWT on installation panel DSNTIP. By default, it is 60 seconds. Utilities can be allowed to wait several multiples of IRLMRWT.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: Lock timeouts are usually caused by an application failing to commit in time for the other thread to gain access to data on pages. Often the problem can be resolved by reducing the time between commits and putting updateable statements near their COMMIT logic. Every time a timeout occurs, DB2 writes the holder and suspender to the MSTR job log. Normally, this number should be as close to zero as possible.</td>
</tr>
<tr>
<td><strong>DEADLOCK</strong></td>
<td>Number of deadlocks (QTXADEA)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 encounters a deadlock situation for which the IRLM must cancel a task involved in a deadly embrace.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: Deadlocks are caused by threads requesting access to two resources which can never be resolved. DB2 chooses its victim by selecting the thread that has done the least number of updates. It records the deadlock in the MSTR address job log. In well-tuned systems, this number should be low. The most frequent cause of deadlock situations are ascending key indexes. The Type 2 indexes can resolve many of these problems because no index locks are taken.</td>
</tr>
<tr>
<td><strong>ESCAL (SHR)</strong></td>
<td>Number of times the maximum page locks per table space are exceeded, and the table space lock escalates from a page lock (IS) to a table space lock (S) for this thread (QTXALES)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the number of locks against a single table space exceeds the number set in DSNZPARM NUMLKTS on installation panel DSNTIPJ or in the LOCKMAX clause of the CREATE TABLESPACE statement.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: This situation is not normal unless you are using repeatable read. If it occurs often, consider changing the LOCKSIZE or LOCKMAX to a higher value, or consider binding the plan with cursor stability or uncommitted read (UR).</td>
</tr>
<tr>
<td><strong>ESCAL (EXCL)</strong></td>
<td>Number of times the maximum page locks per table space are exceeded and the table space lock escalates from a page lock (IX) to a table space lock (X) (QTXALEX)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the number of updateable locks against a single table space exceeds the DSNZPARM NUMLKTS on installation panel DSNTIPJ or in the LOCKMAX clause of the CREATE TABLESPACE statement. It occurs when the LOCKSIZE parameter is specified as ANY and DB2 has escalated the lock owner to an exclusive lock of the entire table.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: This situation is extremely undesirable, usually caused by leaving the LOCKSIZE(ANY) default. To resolve this situation, consider changing the parameter to LOCKSIZE(PAGE) or, in special situations, LOCKSIZE(ROW). This will cause the offending application to take the -904 unavailable resource error rather than cause general unavailability to the rest of the users. This is almost always caused by application failure to commit in a timely fashion and can be resolved by application code changes as well as by DBA action.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAX LOCKS HELD</strong></td>
<td>Maximum number of page or row locks held (QTXANPL)</td>
</tr>
<tr>
<td></td>
<td>This value represents the highest number of page or row locks held during a plan execution.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number may not exceed the NUMLKUS (number of locks per user) count in DSNZPARM. If it does, the user will get a -904 resource unavailable message with a 00C90096 reason code. This number is a significant tuning knob which should be observed when migrating an application from one system to another, particularly if the target DB2 has a different number for the maximum locks threshold. The application can free locks by committing resources more often. If LOCKSIZE(ROW) is specified, DB2 holds a lock for each row on the page. Depending on the row size, this can be extremely costly. Consider the cost of row-level locking carefully before implementing.</td>
</tr>
<tr>
<td><strong>LOCK REQ</strong></td>
<td>Lock request count (QTXALOCK)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Lock/Latch Report, this value is the average number of lock requests per plan execution. This counter is incremented for each call to the IRLM lock manager to acquire a lock on a page or row or to acquire a claim or drain on a data set. <strong>Tuning Tip:</strong> Each lock request is processed by the IRLM. Lock avoidance techniques should show reductions in overall counts and overhead, because latches execute totally within DB2.</td>
</tr>
<tr>
<td><strong>UNLOCK REQ</strong></td>
<td>Unlock request count (QTXAUNLK)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the application has finished processing the page or row or when a claim or drain can be released. <strong>Tuning Tip:</strong> This amount is significant as to cross memory processing and reflects the normal release of resources.</td>
</tr>
<tr>
<td><strong>QUERY REQ</strong></td>
<td>Query request count (QTXAQRY)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the IRLM gets a request to read data. <strong>Tuning Tip:</strong> This information is useful in determining the read activity but does not include lock avoidance techniques.</td>
</tr>
<tr>
<td><strong>CHANGE REQ</strong></td>
<td>Change request count (QTXACHG)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the IRLM is asked to change a lock from one type to another (for example, from S to X).</td>
</tr>
<tr>
<td><strong>OTHER REQUEST</strong></td>
<td>Other IRLM request count (QTXAIRLM)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the IRLM receives a lock request not included in the other counts.</td>
</tr>
<tr>
<td><strong>LOCK SUSP</strong></td>
<td>Number of suspends due to lock conflict (QTXASLOC)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Overview Report and the DB2 Accounting Lock/Latch Report, this value is the average number of suspends due to lock conflict per plan execution. This counter is incremented any time a thread has a conflicting lock request, such as an updater requesting exclusive access to a page another thread is using. <strong>Tuning Tip:</strong> In a multitasking system, suspensions occur in the normal course of the events. If applications are well-tuned, taking frequent commits and holding on to resources for the fewest possible instructions can minimize suspensions. If suspensions cause frequent timeouts, consider row-level locking.</td>
</tr>
</tbody>
</table>
**Field** | **Description**  
--- | ---  
**LATCH SUSP** | Number of suspends due to latch conflicts (QTXASLAT)  
In the DB2 Accounting Lock/Latch Report, this value is the average number of times suspended due to latching per plan execution. This number is incremented when a latch conflict exists between two DB2 threads or internal serialization processing takes place.  
**Tuning Tip**: Latches are generally of extremely short duration. Unless the time is a significant component of overall wait time, it should not cause tuning problems.  
**OTHER SUSP** | Number of suspends due to other conflicts (QTXASOTH)  
In the DB2 Accounting Lock/Latch Report, this value is the average number of times suspended due to other reasons per plan execution. This number is incremented when DB2 internal processes collide.  
**Tuning Tip**: This number is not generally of significance in tuning.  
**TOTAL SUSP** | Total number of suspensions due to lock conflicts, latch conflicts, and other conflicts (QTXASLOC + QTXASLAT + QTXASOTH)  

---

**Logging**

This topic describes the Logging activity section of the Accounting summary—long report (BACCTDR).

**Figure 44: Logging activity**

<table>
<thead>
<tr>
<th>LOGGING</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG RECORDS WRITTEN</td>
<td>1281.00</td>
<td>1281</td>
</tr>
<tr>
<td>TOT BYTES WRITTEN</td>
<td>155900.0</td>
<td>155900</td>
</tr>
</tbody>
</table>

Table 58 on page 197 describes the fields in the Logging activity section.

**Table 58: Logging activity field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| LOG RECORDS WRITTEN    | Number of log records written (QWACLRN)  
The amount of logging for a thread can exceed the amount of logging for units of recovery because the logging for a thread includes logging of actions performed by DB2 on behalf of the thread. |
| TOT BYTES WRITTEN      | Total number of bytes of log records written (QWACLRAB)                     |
| LOG RECORD SIZE        | Average number of bytes written per log record (QWACLRAB/QWACLRN)           |
Miscellaneous

This topic describes the Miscellaneous section of the Accounting summary—long report (BACCTDR).

**Figure 45: Miscellaneous**

<table>
<thead>
<tr>
<th>MISCELLANEOUS</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX STOR LOB VALUES</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 59 on page 198 describes the fields in the Miscellaneous section.

### Table 59: Miscellaneous field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX STOR LOB VALUES</td>
<td>Maximum storage used for LOB values, in megabytes ( )</td>
</tr>
</tbody>
</table>

Package

This topic describes the Package section of the Accounting summary—long report (BACCTDR).

**Figure 46: Package**

<table>
<thead>
<tr>
<th>PACKAGE TOTALS</th>
<th>VALUE</th>
<th>TIMES</th>
<th>PACKAGE TOTALS</th>
<th>AVERAGE TIME</th>
<th>EV</th>
<th>TIME/EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>PACKAGE</td>
<td>ELAP-CL7 TIME-AVG</td>
<td>0.822312</td>
<td>LOCK/LATCH</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>LOCATION</td>
<td>N/A</td>
<td>CPU-TIME</td>
<td>0.011893</td>
<td>SYNCHRONOUS 1/0</td>
<td>0.041877</td>
<td>14.90</td>
</tr>
<tr>
<td>COLLECTION ID</td>
<td>N/A</td>
<td>AGENT</td>
<td>0.000000</td>
<td>OTHER READ 1/0</td>
<td>0.161311</td>
<td>10.38</td>
</tr>
<tr>
<td>PROGRAM NAME</td>
<td>N/A</td>
<td>PAR.TASKS</td>
<td>0.000000</td>
<td>OTHER WRITE 1/0</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>OCCURRENCES</td>
<td>21</td>
<td>SUSPENSIONS-CL8</td>
<td>0.792698</td>
<td>SERV.TASK SWITCH</td>
<td>0.589690</td>
<td>7.19</td>
</tr>
<tr>
<td>SQL STMT - AVERAGE</td>
<td>92.48</td>
<td>TCB</td>
<td>0.631567</td>
<td>ARCH,LOG(QUIESCE)</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>SQL STMT - TOTAL</td>
<td>1942</td>
<td>OUTFillacami</td>
<td>0.011839</td>
<td>ARCHIVE LOG READ</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>STOR PROC EXECUTED</td>
<td>2</td>
<td>CPU SERVICE UNITS</td>
<td>563.76</td>
<td>STORED PROC SCHED</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF EXECUTED</td>
<td>4</td>
<td>CPU SERVICE UNITS</td>
<td>563.76</td>
<td>UDF SCHEDULE</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>USED BY STOR.PROC</td>
<td>0</td>
<td>CPU SERVICE UNITS</td>
<td>563.76</td>
<td>DB2 ENTRY/EXIT</td>
<td>3800</td>
<td>14.90</td>
</tr>
<tr>
<td>USED BY TRIGGER</td>
<td>0</td>
<td>CPU SERVICE UNITS</td>
<td>563.76</td>
<td>NOT ACCOUNTED</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>SUCC AUTH CHECK</td>
<td>1</td>
<td>CPU SERVICE UNITS</td>
<td>563.76</td>
<td>NOTIFY MESSAGE</td>
<td>0.000000</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 60 on page 198 describes the fields in the Package section.

### Table 60: Package field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>Whether this report section describes a package or a DBRM (QPACTYPE)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Location name (QPACLOCN)</td>
</tr>
<tr>
<td></td>
<td>This name is the location for a package that is remotely bound. If blank, the DBRM or package is executed locally.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This field is useful for determining whether this package was remotely bound. If the DBRM or package is remotely bound, all times in the package/DBRM accounting are local times to execute the remote package for this requesting thread.</td>
</tr>
<tr>
<td>COLLECTION ID</td>
<td>Package collection ID (QPACCOLN)</td>
</tr>
<tr>
<td></td>
<td>This name is the collection to which a package belongs. It is blank for a DBRM. A collection is a logical grouping of packages.</td>
</tr>
<tr>
<td>PROGRAM NAME</td>
<td>Program ID (QPACPKID)</td>
</tr>
<tr>
<td></td>
<td>This name is the program name for a DBRM or package. It correlates to the EXPLAIN program ID.</td>
</tr>
<tr>
<td>OCCURRENCES</td>
<td>Number of package sections in accounting records with accounting data for a package or DBRM (count of QPACPAC)</td>
</tr>
<tr>
<td>SQL STMT - AVERAGE</td>
<td>SQL request count (QPACSQCLC)</td>
</tr>
<tr>
<td></td>
<td>This number is the total number of SQL statements executed from this package or DBRM, including COMMIT or ROLLBACK statements.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This field assists you in determining which packages are more SQL intensive. The totals for packages may not equal the totals in the accounting section because of differences in the counters such as commits and rollbacks.</td>
</tr>
<tr>
<td>SUCC AUTH CHECK</td>
<td>For Accounting reports, the number of times authorization information was found for this package without accessing the DB2 catalog (QPACPAC)</td>
</tr>
<tr>
<td>ELAP-CL7 TIME-AVG</td>
<td>Elapsed time of a package/DBRM execution (QPACSCT)</td>
</tr>
<tr>
<td></td>
<td>This time represents the total elapsed times of all executions of this package or DBRM. Accounting class 7 must be active to gather this data.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This information can provide more granular information as to which package or DBRM consumed the most resources.</td>
</tr>
<tr>
<td>CPU-TIME</td>
<td>Class 7 CPU time spent by the package or DBRM</td>
</tr>
<tr>
<td></td>
<td>It indicates the TCB time or the accumulated CPU time for processing parallel tasks. This is valid for query CP parallelism, sysplex query parallelism, and parallel tasks generated by utilities.</td>
</tr>
<tr>
<td></td>
<td>■ AGENT</td>
</tr>
<tr>
<td></td>
<td>Class 7 TCB time in DB2 for executing the package or DBRM</td>
</tr>
<tr>
<td></td>
<td>■ PAR.TASKS</td>
</tr>
<tr>
<td></td>
<td>Accumulated time for the package or DBRM to process parallel tasks</td>
</tr>
<tr>
<td></td>
<td>These tasks can be query CP, Sysplex query, or utility parallel tasks.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SUSPENSIONS-CL8</td>
<td>Wait time for the package or DBRM due to class 8 suspensions.</td>
</tr>
<tr>
<td></td>
<td>▪ TCB</td>
</tr>
<tr>
<td></td>
<td>Class 8 suspension time for executing the package or DBRM</td>
</tr>
<tr>
<td></td>
<td>In query or utility parallelism, this does not include the class 8 time for parallel tasks.</td>
</tr>
<tr>
<td></td>
<td>▪ PAR.TASKS</td>
</tr>
<tr>
<td></td>
<td>Sum of the suspension times of the parallel tasks for the package or DBRM</td>
</tr>
<tr>
<td></td>
<td>The tasks can be query CP or sysplex query parallel tasks or tasks generated by utilities.</td>
</tr>
<tr>
<td>NOT ACCOUNTED</td>
<td>Total unaccounted time in DB2 due to the execution of the package or DBRM</td>
</tr>
<tr>
<td></td>
<td>In query CP and Sysplex query parallelism, it is the unaccounted time of the originating task only.</td>
</tr>
<tr>
<td>AVG.DB2 ENTRY/EXIT</td>
<td>Number of DB2 entries or exits processed during the execution of the package or DBRM</td>
</tr>
<tr>
<td>DB2 ENTRY/EXIT</td>
<td>Number of DB2 entries or exits processed during the execution of the package or DBRM</td>
</tr>
<tr>
<td>CPU SERVICE UNITS</td>
<td>CPU service unit time for a package or DBRM. It indicates the TCB time or the accumulated time for processing parallel tasks if query CP or Sysplex query parallelism is exploited</td>
</tr>
<tr>
<td></td>
<td>▪ AGENT</td>
</tr>
<tr>
<td></td>
<td>TCB service unit time for a package or DBRM</td>
</tr>
<tr>
<td></td>
<td>▪ PAR.TASKS</td>
</tr>
<tr>
<td></td>
<td>CPU service unit times accumulated for a package or DBRM for processing parallel tasks</td>
</tr>
<tr>
<td></td>
<td>These tasks can be query CP or Sysplex query parallel tasks.</td>
</tr>
<tr>
<td>LOCK/LATCH</td>
<td>Wait time for lock/latch (QPACAWTL)</td>
</tr>
<tr>
<td></td>
<td>This value indicates the elapsed time the thread waited for transaction locks and latches while executing this package/DBRM. Accounting class 8 must be activated to determine this value.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: This time reflects the amount of time the thread was suspended because of an incompatible lock or latch mode.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SYNCHRONOUS I/O</td>
<td>Number of wait trace events processed for waits for synchronous I/O under this thread while executing this package or DBRM (QPACARNE)</td>
</tr>
<tr>
<td>OTHER THREAD READ I/O</td>
<td>Wait time for asynchronous reads (QPACAWTR)</td>
</tr>
<tr>
<td>OTHER THREAD WRITE I/O</td>
<td>Wait time for write I/O (QPACAWTW)</td>
</tr>
<tr>
<td>EXECUTION TASK SWITCH</td>
<td>Wait time for DB2 services (QPACAWTE)</td>
</tr>
<tr>
<td></td>
<td>This value is the time spent waiting for special DB2 services while executing this package/DBRM. A synchronous execution unit switch is done from the thread to one of the DB2 service tasks. Accounting class 8 must be activated to obtain this time.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
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<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ACTIVITY TYPE</td>
<td>For nested activity, values shown are STORED PROC, TRIGGER, UDF; otherwise, NONNESTED is shown (QPACAAGF)</td>
</tr>
<tr>
<td></td>
<td>01 = StorProc</td>
</tr>
<tr>
<td></td>
<td>02 = UDF</td>
</tr>
<tr>
<td></td>
<td>03 = Trigger</td>
</tr>
<tr>
<td></td>
<td>All others = non-nested</td>
</tr>
<tr>
<td>ACTIVITY NAME</td>
<td>Name of the nested activity (QPACAANM)</td>
</tr>
<tr>
<td>SCHEMA NAME</td>
<td>Schema name of the nested activity (QPACASCH)</td>
</tr>
<tr>
<td>ARCHIVE LOG QUIESCE</td>
<td>Wait time for log quiesce (QPACALOG)</td>
</tr>
<tr>
<td></td>
<td>This value is the time spent waiting for an -ARCHIVE LOG MODE(QUIESCE) to take place while executing this package/DBRM. This process externalizes buffers and switches the active log data set. Time reflected here is the time the thread waited, not the time for the command to complete. Accounting class 8 must be activated to obtain this time.</td>
</tr>
<tr>
<td>ARCHIVE LOG READ</td>
<td>Wait time for archive read from tape (QPACAWAR)</td>
</tr>
<tr>
<td></td>
<td>This value is the amount of time spent waiting for reads from an archive tape while executing this package/DBRM. Time spent waiting for an archive tape is either for the completion of the RECOVER utility or for an application program, which has not committed, to read the archive tape in order to complete backout. Accounting class 8 must be activated to obtain this time.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: If this time is large, the application program should commit more often. It might also make sense to increase the size and number of active logs.</td>
</tr>
<tr>
<td>STORED PROC SCHED</td>
<td>Wait time for SPAS TCB scheduling (QPACAST)</td>
</tr>
<tr>
<td></td>
<td>This time is the elapsed time spent waiting for an available TCB in the Stored Procedures Address Space to become available for scheduling a stored procedure.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: This time should be minimal depending on the workload to the Stored Procedures Address space. It is calculated only if accounting class 8 is active.</td>
</tr>
<tr>
<td>UDF SCHEDULE</td>
<td>Wait time for an available TCB before a user-defined function could be scheduled while executing this package or DBRM ((QPACCAST+QPACUDST)/QPACCANM)</td>
</tr>
<tr>
<td>DRAIN LOCK</td>
<td>Wait time for drain lock (QPACAWDR)</td>
</tr>
<tr>
<td></td>
<td>This value is the time spent by a requester of a drain lock, such as a utility or command, waiting to acquire that lock while executing this package/DBRM. Processes, such as utilities that serialize events to page sets, must acquire a drain lock. This value is the time spent waiting for this event. Accounting class 8 must be activated to obtain this time.</td>
</tr>
<tr>
<td>CLAIM RELEASE</td>
<td>Wait time for claim release (QPACAWCL)</td>
</tr>
<tr>
<td></td>
<td>This value is the time spent by the holder of a drain lock waiting for SQL claimers to complete their activity while executing this package/DBRM. Drainers must wait until the SQL claim count reaches zero. This value is the time spent waiting for them to clear. Accounting class 8 must be activated to obtain this time.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| PAGE LATCH            | Wait time for page latch contention (QPACAWTP)  
This value is the time spent waiting for page latching activities due to lock avoidance while executing this package/DBRM. Accounting class 8 must be activated to obtain this time.  
**Tuning Tip:** Page latching can be avoided by scheduling applications when there is a lower likelihood of latch contention. |
| NOTIFY MESSAGES       | Wait time for data sharing notify messages (QPACAWTG)  
This value is the amount of wait time for sending notify messages to another data sharing member while executing this package/DBRM. When tables in a data sharing group are CREATED, ALTERed, or DROPped in a data sharing group, intersystem messages must be sent to update the database descriptors (DBDs) in the other members’ EDM pools. This value is the time spent waiting for this message traffic to occur. This time is collected only when accounting class 8 is activated and data sharing is enabled. |
| GLOBAL CONTENTION    | Wait time for global lock contention (QPACAWTJ)  
This time is the amount of elapsed time caused by an IRLM lock suspension due to global lock contention while executing this package/DBRM. It requires intersystem communication to resolve. This time is collected only when accounting class 8 is activated and data sharing is enabled. |
| ARCH, ACT READS      | Average synchronous EU switch wait time                                                                                                             |
| TOTAL CL8 SUSPENDS   | All class 8 wait times  
In the DB2 Accounting Package Report, this value is the total time the program spent waiting for all types of suspensions (QPACAWTL+QPACAWTI+QPACAWTR +QPACAWTW+ QPACAWTE+ QPACAVALID+QPCAVALID+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL+QPCAWDL). |

**Query parallelism**

This topic describes the Query parallelism section of the Accounting summary—long report (BACCTDR).

**Figure 47: Query parallelism**

<table>
<thead>
<tr>
<th>QUERY PARALLELISM</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM MEMBERS USED</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>MAXIMUM DEGREE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>GROUPS EXECUTED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>RAN AS PLANNED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>RAN REDUCED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>ONE DB2-COORDINATOR = NO</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>ONE DB2-ISOLATION LEVEL</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENTIAL-CURSOR</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENTIAL-NO ESA SORT</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENTIAL-NO BUFFER</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SEQUENTIAL-ENCLAVE SERVICES</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>MEMBER SKIPPED (%)</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 61 on page 204 describes the fields in the Query parallelism section.

Table 61: Query parallelism field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM MEMBERS USED</td>
<td>Maximum number of DB2 members that participated in the processing of a query</td>
</tr>
<tr>
<td>MAXIMUM DEGREE</td>
<td>Maximum degree of parallel processing executed (QXMAXDEG)</td>
</tr>
<tr>
<td></td>
<td>This counter is set to the high-water mark among all parallel groups executed for query parallelism. The number reflects the plan that executed the highest degree of parallel processing among all parallel groups.</td>
</tr>
<tr>
<td>GROUPS EXECUTED</td>
<td>Number of parallel groups executed (QXTOTGRP)</td>
</tr>
<tr>
<td></td>
<td>This counter reflects the total number of parallel groups executed.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number can provide a good idea of how often parallel processing was used for both read and sort activity.</td>
</tr>
<tr>
<td>RAN AS PLANNED</td>
<td>Number of parallel groups executed at planned degree (QXNORGRP)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the number of parallel tasks (degree) at execution time is the same as the number of parallel tasks planned at BIND time.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The higher this number is, the better DB2 is tuned. This situation is ideal.</td>
</tr>
<tr>
<td>RAN REDUCED</td>
<td>Parallel group degraded due to buffer shortage (QXREDGRP)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the buffer pool does not have enough buffers to support as many degrees of parallel processing as had been planned. DB2 checks buffer allocations at both BIND and execution time. It assumes there will be buffers set aside for parallel processing. If at execution time a similar number of buffers do not exist, DB2 will degrade the parallel processes to a lesser degree or no parallelism.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Three parameters can be altered (ALTER BUFFERPOOL command) to resolve this situation. The overall size of the buffer pool is controlled by the VPSIZE (virtual pool size) parameter. The amount of sequential buffers is set by the VPSEQT (virtual pool sequential threshold) parameter. In the amount of buffers reserved for sequential processing, a reserve of buffers available for parallel processing must be maintained by the VPPSEQT (virtual pool parallel sequential threshold) parameter. If a significant number of parallel processes are degraded due to buffer shortage or contention, consider using a different buffer pool or altering the buffer pool used so that sufficient parallel sequential buffers are present.</td>
</tr>
</tbody>
</table>

Accounting report fields
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| ONE DB2-COORDINATOR = NO                            | Number of parallel groups executed on a single DB2 due to one of the following reasons (QXCOORNO):  
  ■ When the plan or package was bound, the COORDINATOR subsystem parameter was set to YES, but the parameter is set to NO when the program runs.  
  ■ The plan or package was bound on a DB2 with the COORDINATOR subsystem parameter set to YES, but the program is being run on a different DB2 that has the COORDINATOR value set to NO.                                                                                                                                                                                                 |
| ONE DB2-ISOLATION LEVEL                             | Number of parallel groups executed on a single DB2 because the plan or package was bound with an isolation value of repeatable read or read stability (QXISORR)                                                                                                                                                                                                                                                                                           |
| SEQUENTIAL-CURSOR                                   | Parallel group fallback to sequential due to updateable cursor (QXDEGCUR)  
  This counter is incremented when DB2 detects a cursor that is not clearly read-only and falls back from parallel processing to sequential.  
  **Tuning Tip:** To resolve this problem, the application program should have a cursor which is unambiguously read-only, with updates through another cursor or statement.                                                                                                                                                                                                                                    |
| SEQUENTIAL-NO ESA SORT                              | Parallel group fallback to sequential due to lack of sort assist (QXDEGESA)  
  This counter is incremented when DB2 detects that the hardware sort assist facility is not present to logically partition the DB2 temporary DSNDB07 workfiles. The parallel sort operation falls back to sequential.  
  **Tuning Tip:** This situation will occur until the necessary hardware assist is purchased.                                                                                                                                                                                                                                                                                          |
| SEQUENTIAL-NO BUFFER                                | Parallel group fallback to sequential due to buffer shortage (QXDEGBUF)  
  This counter is incremented when the buffer pool does not have enough buffer storage in the virtual pool to support parallel processing. DB2 checks buffer allocations at both BIND and execution time. It assumes that buffers will be set aside for parallel processing. If at execution time a similar number of buffers do not exist, DB2 will degrade the parallel processes to a lesser degree or to no parallelism.  
  **Tuning Tip:** Three parameters can be altered (ALTER BUFFERPOOL command) to resolve this situation. The overall size of the buffer pool is controlled by the VPSIZE (virtual pool size) parameter. The amount of sequential buffers is set by the VPSEQT (virtual pool sequential threshold) parameter. In the amount of buffers reserved for sequential processing, a reserve of buffers available for parallel processing must be maintained by the VPPSEQT (virtual pool parallel sequential threshold) parameter. If a significant number of parallel processes are degraded due to buffer shortage or contention, consider using a different buffer pool or altering the buffer pool used so that sufficient parallel sequential buffers are present. |
| SEQUENTIAL-ENCLAVE SERVICES                         | Parallel group fallback to sequential due to unavailable enclave services (QXDEGENC)  
  This counter is incremented when DB2 detects that MVS 5.2 enclave support is unavailable to support parallel CP processing. The parallel group falls back to sequential.  
  **Tuning Tip:** MVS Enclave Support in MVS 5.2 sets objectives for parallel services to perform within service goals set by management in the MVS Workload Manager. The DB2 parallel tasks run as enclave SRBs. The solution is to migrate this system to MVS 5.2 as soon as practical to do so.                                                                                                                                                         |
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| MEMBER SKIPPED (%)       | Number of times the parallelism coordinator had to bypass a DB2 when distributing tasks because there was not enough buffer pool storage on one or more DB2 members (QXXCSKIP)  
This field is incremented only on the parallelism coordinator, and it is incremented only once per parallel group, even though it is possible that more than one DB2 has a buffer pool shortage for that parallel group.  
**Tuning Tip:** The purpose of this count is to indicate that there are not enough buffers on one or more members. Therefore, this count is incremented only when the buffer pool is defined to allow parallelism. For example, if VPXPSEQT=0 on an assistant, DB2 does not send parallel work there, but this count is not incremented. |
| DISABLED BY RLF           | Number of times query parallelism was disabled by the Resource Limit Facility (RLF) for at least one dynamic select statement (QXRLFDPA)                                                                         |
| REFORM PARAL-CONFIG       | Total number of parallel groups for which DB2 reformulated the parallel portion of the access path because the sysplex configuration at run time was different from the sysplex configuration at bind time (QXREPOPI)  
This counter is incremented only by the parallelism coordinator at run time. |
| REFORM PARAL-NO BUF       | Total number of parallel groups for which DB2 reformulated the parallel portion of the access path because not enough buffer pool resource existed (QXREPOP2)  
This counter is incremented only by the parallelism coordinator at run time. |
| ONE DB2-DCL TEMP TABLE    | Number of parallel groups for which DB2 reformulated the parallel portion of the access path because a query block used a user-defined function with a Declared Temporary Table (QXDEGDTT) |

### RID list

This topic describes the RID list section of the Accounting summary—long report (BACCTDR).

**Figure 48: RID list**

<table>
<thead>
<tr>
<th>RID LIST</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUCCESSFUL</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>FAIL-STORAGE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>FAIL-LIMIT</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 62 on page 207** describes the fields in the RID list section.
Table 62: RID list field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUCCESSFUL</td>
<td>Number of times RID pool is used (QXMIAP)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the RID pool in the database services address space is used. The RID pool is always used to sort index keys by the RBA so that list prefetch (read-ahead buffering) can be enabled against data pages.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: RID pool usage and sizing is critical for effective DB2 performance. The RID pool size is set by the systems installer in DSNZPARM SPRMRDP on the DSNTIPC installation panel. The DB2 RID pool is used for two purposes:</td>
</tr>
<tr>
<td></td>
<td>- To use multiple indexes to access a table</td>
</tr>
<tr>
<td></td>
<td>The index entries are read, sorted into RID sequence, unioned (for OR processing), or intersected (for AND processing). Then the data from the table is accessed using list prefetch.</td>
</tr>
<tr>
<td></td>
<td>- To resolve an answer set from a non-matching index scan or a nested loop join</td>
</tr>
<tr>
<td></td>
<td>Again, the RIDs are sorted into RID sequence and the data is read using list prefetch. Failure of RID pool storage causes DB2 to revert to table space scan processing. For large tables, this can cause extremely poor performance. DB2 will also end list prefetching as inefficient if more than 25% of the rows in the table must be accessed.</td>
</tr>
<tr>
<td>FAIL-STORAGE</td>
<td>Number of RID pool failures due to no storage (QXNSMIAP)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when DB2 detects that no storage is available in the RID pool for a multiple index access or list prefetch request. The field can be incremented at any stage (retrieval, sorting, ANDing/ORing of RID lists for non-matching index scan processing) or incremented when each index of a multiple index access scan finds no more storage is available.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: This situation is extremely undesirable because the portion of the query that would use the index falls back to table scan processing. If this situation occurs often, the size of the RID pool specified in SPRMRDP of the DSNZPARMs (on installation panel DSNTIPC) should be increased.</td>
</tr>
<tr>
<td>FAIL-LIMIT</td>
<td>Number of RID pool failures due to exceeding internal limits (QXMRMIAP)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when DB2 detects that a single index would exceed 50% availability in the RID pool for a multiple index access or list prefetch request. The field can be incremented at any stage (retrieval, sorting, ANDing/ORing of RID lists for non-matching index scan processing) or incremented when each index of a multiple index access scan finds no more storage is available.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: DB2 attempts to protect the RID pool from a large result set that would exceed 50% of the pool or reach the maximum size of 16 million RIDs for a single RID; in other words, it will cause a RID pool failure if the number of RIDS from any single index or any index involved in a multiple index access attempt exceeds 50%. If this situation happens often, attempt to find the offending application and change the SQL or increase the size of the RID pool.</td>
</tr>
</tbody>
</table>
## ROW ID

This topic describes the ROW ID section of the Accounting summary—long report (BACCTDR).

### Figure 49: ROW ID

<table>
<thead>
<tr>
<th>Field</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECT ACCESS</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>INDEX USED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>TS SCAN USED</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 63 on page 208 describes the fields in the ROW ID section.

### Table 63: ROW ID field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECT ACCESS</td>
<td>Number of times that DB2 used direct row access to locate a record (QXROIMAT)</td>
</tr>
<tr>
<td>INDEX USED</td>
<td>Number of times that DB2 attempted to use direct row access but reverted to using an index to locate a record (QXROIIDX)</td>
</tr>
<tr>
<td>TS SCAN USED</td>
<td>Number of times that DB2 attempted to use direct row access but reverted to using a table space scan to locate a record (QXROITS)</td>
</tr>
</tbody>
</table>

## Stored procedures

This topic describes the Stored procedures section of the Accounting summary—long report (BACCTDR).

### Figure 50: Stored procedures

<table>
<thead>
<tr>
<th>Field</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL STMT</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PROC ABEND</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>CALL TIMEOUT</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>CALL REJECT</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 64 on page 208 describes the fields in the Stored procedures section.

### Table 64: Stored procedures field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL STMT</td>
<td>Number of SQL CALL statements executed (QXCALL)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting Stored Procedures Report, this value is the average number of CALL statements executed. It is a count of the number of SQL CALL statements processed for the application and it activates a DB2 stored procedure.</td>
</tr>
</tbody>
</table>
### Field | Description
--- | ---
**PROC ABEND** | Number of stored procedure abends (QXCALLAB)
In the DB2 Accounting Stored Procedures Report, this value is the average number of times a stored procedure terminated abnormally.
**Tuning Tip:** Large numbers here indicate that one or more stored procedures have fatal errors.

**CALL TIMEOUT** | Number of SQL CALL statements timed out (QXCALLTO)
In the DB2 Accounting Stored Procedures Report, this value is the average number of times an SQL CALL statement timed out while waiting to be scheduled. This counter is incremented when the Stored Procedures Address Space does not have a TCB available within the time limit specified in the DSNZPARM TIMEOUT parameter to schedule the execution of an SQL CALL statement.
**Tuning Tip:** Appropriate fixes include the following actions:
- Reduce the amount of CPU service units in other stored procedures to get better throughput. @Stop stored procedures no longer needed.
- Increase the number of TCBs available in the Stored Procedures Address Space (by increasing the NUMTCB parameter in the Stored Procedures Address Space JCL).

**CALL REJECT** | Number of SQL CALL statements rejected because the procedure was stopped (QXCALLRJ)
In the DB2 Accounting Stored Procedures Report, this value is the average number of times an SQL CALL statement was rejected because the procedure was stopped. This counter is incremented when an SQL application CALLs a stored procedure which has been stopped by the operator or system administrator.
**Tuning Tip:** If this problem happens frequently, ensure that the procedure is started in normal mode.

---

### SQL DCL

This topic describes the SQL DCL section of the Accounting summary—long report (BACCTDR).

**Figure 51: SQL DCL**

<table>
<thead>
<tr>
<th>SQL DCL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK TABLE</td>
<td>0</td>
</tr>
<tr>
<td>GRANT</td>
<td>0</td>
</tr>
<tr>
<td>REVOKE</td>
<td>0</td>
</tr>
<tr>
<td>SET SQLID</td>
<td>0</td>
</tr>
<tr>
<td>SET HOST VAR</td>
<td>0</td>
</tr>
<tr>
<td>SET DEGREE</td>
<td>0</td>
</tr>
<tr>
<td>SET RULES</td>
<td>0</td>
</tr>
<tr>
<td>CONNECT 1</td>
<td>0</td>
</tr>
<tr>
<td>CONNECT 2</td>
<td>0</td>
</tr>
<tr>
<td>SET CONNECT</td>
<td>0</td>
</tr>
<tr>
<td>RELEASE</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 65 on page 210 describes the fields in the SQL DCL section.

### Table 65: SQL DCL field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK TABLE</td>
<td>Number of LOCK TABLE statements executed (either SHARE or EXCLUSIVE) (QXLOCK)</td>
</tr>
<tr>
<td>GRANT</td>
<td>Number of GRANT statements executed (QXGRANT)</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>This field is useful for the auditor who wishes to monitor the grants of</td>
</tr>
<tr>
<td></td>
<td>authority by user. Other audit traces can be activated to capture which</td>
</tr>
<tr>
<td></td>
<td>authorities were granted. The catalog can also be queried.</td>
</tr>
<tr>
<td>REVOKE</td>
<td>Number of REVOKE statements executed (QXREVOK)</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>This field is useful for the auditor who wants to monitor the revocations of</td>
</tr>
<tr>
<td></td>
<td>authority by user. Other audit traces can be activated to capture which</td>
</tr>
<tr>
<td></td>
<td>authorities were revoked.</td>
</tr>
<tr>
<td>SET SQLID</td>
<td>Number of SET CURRENT SQLID statements executed (QXSETSQL)</td>
</tr>
<tr>
<td>SET HOST VAR</td>
<td>Number of SET HOST VARIABLE statements executed (QXSETHV)</td>
</tr>
<tr>
<td>SET DEGREE</td>
<td>Number of SET CURRENT DEGREE statements executed (QXSETCDG)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of the SQL SET CURRENT DEGREE statements processed for</td>
</tr>
<tr>
<td></td>
<td>the application. This register enables or disables parallel processing for</td>
</tr>
<tr>
<td></td>
<td>dynamic SQL.</td>
</tr>
<tr>
<td>SET RULES</td>
<td>Number of SET CURRENT RULES statements executed (QXSETCRL)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of the SQL SET CURRENT RULES statements processed for</td>
</tr>
<tr>
<td></td>
<td>the application. This register is used to change syntax parsing from SQL</td>
</tr>
<tr>
<td></td>
<td>rules to ANSI/SQL processing.</td>
</tr>
<tr>
<td>CONNECT 1</td>
<td>Number of Type 1 CONNECT statements executed (QXCON1)</td>
</tr>
<tr>
<td></td>
<td>This value is a count of the number of Type 1 SQL CONNECT statements</td>
</tr>
<tr>
<td></td>
<td>processed for the application.</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>Type 1 SQL CONNECT statements allow one site that can be updated in the</td>
</tr>
<tr>
<td></td>
<td>connection. Type 2 SQL CONNECT statements allow multiple sites that can be</td>
</tr>
<tr>
<td></td>
<td>updated in the distributed connection. The type of CONNECT statement is</td>
</tr>
<tr>
<td></td>
<td>specified as a precompiler parameter CONNECT(1) or CONNECT(2).</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| CONNECT 2           | Number of Type 2 CONNECT statements executed (QXCON2)  
This value is a count of the number of Type 2 CONNECT SQL statements processed for the application.  
**Tuning Tip:** Type 1 SQL CONNECT statements allow one site that can be updated in the connection. Type 2 SQL CONNECT statements allow multiple sites that can be updated in the distributed connection. The type of CONNECT statement is specified as a precompiler parameter CONNECT(1) or CONNECT(2). |
| SET CONNECT         | Number of SET CONNECTION statements executed (QXSETCON)  
This number is a count of the SQL SET CONNECTION statements processed for the application.  
**Tuning Tip:** This verb is required to perform multisite updates. |
| RELEASE             | Number of RELEASE statements issued (QXREL)  
This number is a count of the SQL RELEASE statements processed for the application. |
| CALL                | Number of CALL statements executed (QXCALL) |
| ASSOC.LOCATORS      | Number of ASSOCIATE LOCATOR statements executed (QXALOCL)  
These statements get the result set locator value for each result set returned by a stored procedure. |
| ASSOC.CURSOR        | Number of ASSOCIATE CURSOR statements executed (QXALOCC) |
| HOLD LOCATOR        | Number of HOLD LOCATOR statements executed (QXHOLDL) |
| FREE LOCATOR        | Number of FREE LOCATOR statements executed (QXFREEL) |
| DCL-ALL             | Total number of DCL statements executed  
QXLOCK + QXGRANT + QXREVOKE + QXSETSQL + QXSETHV + QXSETCDG + QXSETCRL + QXCON1 + QXCON2 + QXSETCON + QXREL + QXCALL + QXHOLDL + QXFREEL |
| SET CURRENT PATH    | Number of SET CURRENT PATH statements executed (QXSETPTH) |
| SET CUR PREC        | Number of SET CURRENT PRECISION statements executed (QXSETCPR) |

**SQL DDL**

This topic describes the SQL DDL section of the Accounting summary—long report (BACCTDR).

**Figure 52: SQL DDL**

<table>
<thead>
<tr>
<th>SQL DDL</th>
<th>CREATE</th>
<th>DROP</th>
<th>ALTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TEMP TABLE</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>INDEX</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TABLESPACE</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DATABASE</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>STOGROUP</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SYNONYM</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Table 66 on page 212 describes the fields in the SQL DDL section.

Table 66: SQL DDL field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE</td>
<td>Number of CREATE TABLE statements executed (QXCRRTAB)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP TABLE statements (QXDRPTA)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER TABLE statements executed (QXALTTA)</td>
</tr>
<tr>
<td>TEMP TABLE</td>
<td>Number of CREATE GLOBAL TEMP TABLE statements executed (QXCRGTT)</td>
</tr>
<tr>
<td>INDEX</td>
<td>Number of CREATE INDEX statements executed (QXCRINX)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP INDEX statements (QXDRPIX)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER INDEX statements executed (QXALTIX)</td>
</tr>
<tr>
<td>TABLESPACE</td>
<td>Number of CREATE TABLESPACE statements executed (QXCTABS)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP TABLESPACE statements (QXDRPTS)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER TABLESPACE statements executed (QXALTTS)</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Number of CREATE DATABASE statements executed (QXCRDAB)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP DATABASE statements (QXDRPDB)</td>
</tr>
<tr>
<td></td>
<td>Number of SET ALTER DATABASE statements executed (QXALDAB)</td>
</tr>
<tr>
<td>STOGROUP</td>
<td>Number of CREATE STOGROUP statements executed (QXCRSTG)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP STOGROUP statements (QXDRPST)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER STOGROUP statements executed (QXALTST)</td>
</tr>
<tr>
<td>SYNONYM</td>
<td>Number of CREATE SYNONYM statements executed (QXCRSYN)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP SYNONYM statements (QXDRPSY)</td>
</tr>
<tr>
<td>VIEW</td>
<td>Number of CREATE VIEW statements executed (QXDEFVU)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP VIEW statements (QXDRPVU)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER VIEW statements executed (QXALTIVV)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ALIAS</td>
<td>Number of CREATE ALIAS statements executed (QXCRALS)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP ALIAS statements (QXDRPAL)</td>
</tr>
<tr>
<td>PACKAGE</td>
<td>Number of DROP PACKAGE statements (QXDRPPKG)</td>
</tr>
<tr>
<td>PROCEDURE</td>
<td>Number of CREATE PROCEDURE statements executed (QXCRPRO)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP PROCEDURE statements (QXDRPPR)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER PROCEDURE statements executed (QXALPRO)</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>Number of CREATE FUNCTION statements executed (QXCRUDF)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP USER DEFINED FUNCTION (QXDRPFN)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER FUNCTION statements executed (QXALUDF)</td>
</tr>
<tr>
<td>TRIGGER</td>
<td>Number of CREATE TRIGGER statements (QXCTRIG)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP TRIGGER statements (QXDRPTR)</td>
</tr>
<tr>
<td>DIST TYPE</td>
<td>Number of CREATE DISTINCT TYPE statements executed (QXCDIST)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP DISTINCT TYPE statements (QXDDIST)</td>
</tr>
<tr>
<td>SEQUENCE</td>
<td>Number of CREATE SEQUENCE statements executed (QXCRESEQ)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP SEQUENCE statements executed (QXDROSEQ)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER SEQUENCE statements executed (QXALTSEQ)</td>
</tr>
<tr>
<td>ROLE</td>
<td>Number of CREATE ROLE statements executed (QXCRROL)</td>
</tr>
<tr>
<td>TRUSTED CT</td>
<td>Number of CREATE TRUSTED CONTEXT statements executed (QXCRCTX)</td>
</tr>
<tr>
<td>PERMIT/MASK</td>
<td>Number of CREATE MASK or PERMISSION (QXCREMP)</td>
</tr>
<tr>
<td></td>
<td>Number of DROP MASK or PERMISSION (QXDRPMP)</td>
</tr>
<tr>
<td></td>
<td>Number of ALTER MASK or PERMISSION (QXALTMP)</td>
</tr>
<tr>
<td>JAR</td>
<td>Number of ALTER JAR statements (QXALTJR)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total Number of CREATE, DROP, or ALTER statements executed</td>
</tr>
<tr>
<td>COMMENT ON</td>
<td>Number of COMMENT ON statements executed (QXCMTON)</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This field is useful for determining whether documentation was done during a particular time period (COMMENT ON simply puts comments into the DB2 catalog).</td>
</tr>
<tr>
<td>RENAME TBL</td>
<td>Number of CREATE GLOBAL TEMPORARY TABLE statements (QXCRGTT)</td>
</tr>
<tr>
<td>LABEL ON</td>
<td>Number of LABEL ON statements executed (QXLABON)</td>
</tr>
<tr>
<td>RENAME INDEX</td>
<td>Number of RENAME INDEX (QXRNIX)</td>
</tr>
<tr>
<td>PREPARE RESTRICTED</td>
<td>Number of PREPARE RESTRICTED statements (QXPRRESI)</td>
</tr>
<tr>
<td>MERGE STATEMENT</td>
<td>Number of MERGE statements (QXMERGE)</td>
</tr>
<tr>
<td>TRUNCATE TABLE</td>
<td>Number of TRUNCATE TABLE statements (QXTRTBL)</td>
</tr>
</tbody>
</table>
**SQL DML**

This topic describes the SQL DML section of the Accounting summary—long report (BACCTDR).

**Figure 53: SQL DML**

<table>
<thead>
<tr>
<th>SQL DML</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>INSERT</td>
<td>1000.00</td>
<td>1000</td>
</tr>
<tr>
<td>UPDATE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>DELETE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>DESC TBL</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PREPARE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>OPEN</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>FETCH</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>CLOSE</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>DML-ALL</td>
<td>1000.00</td>
<td>1000</td>
</tr>
</tbody>
</table>

Table 67 on page 214 describes the fields in the SQL DML section.

**Table 67: SQL DML field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>Number of embedded SELECT statements (QXSELECT or QPSELECT) This number is a count of the single embedded SELECT statements processed for the application.</td>
</tr>
<tr>
<td>INSERT</td>
<td>Number of INSERT statements (QXINSRT or QPINSRT) In the DB2 Accounting SQL Report, this value is the average number of INSERT statements processed per plan execution. This counter is incremented when an INSERT statement is processed for the application.</td>
</tr>
<tr>
<td>UPDATE</td>
<td>Number of UPDATE statements (QXUPDTE or QPUPDTE) In the DB2 Accounting SQL Report, this value is the average number of UPDATE statements processed per plan execution. This counter is incremented when an UPDATE statement is processed for the application.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Number of DELETE statements executed (QXDELETE or QPDELETE) In the DB2 Accounting SQL Report, this value is the average number of DELETE statements processed per plan execution. This counter is incremented when a DELETE statement is processed for the application.</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>Number of DESCRIBE statements executed (QXDESC or QPDESC) This counter is incremented when a DESCRIBE statement (for dynamic or distributed processing) is processed for the application. The count between a server and requester may not be equal.</td>
</tr>
<tr>
<td>DESC TBL</td>
<td>Number of DESCRIBE TABLE statements executed (QXDSCRTB)</td>
</tr>
</tbody>
</table>
### Field

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREPARE</td>
<td>Number of PREPARE statements (QXPREP or QPPREP)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting SQL Report, this value is the average number of PREPARE statements processed per plan execution. This counter is incremented when the SQL PREPARE statement (which mini-binds a dynamic SQL statement) is processed for the application. The count between a server and requester may not be equal.</td>
</tr>
<tr>
<td>OPEN</td>
<td>Number of OPEN CURSOR statements (QXOPEN or QPOOPEN)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting SQL Report, this value is the average number of OPEN CURSOR statements processed per plan execution. This counter is incremented when the OPEN CURSOR statement is processed for the application.</td>
</tr>
<tr>
<td>FETCH</td>
<td>Number of FETCH statements executed (QXFETCH or QPFETCH)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting SQL Report, this value is the average number of FETCH statements processed per plan execution.</td>
</tr>
<tr>
<td>CLOSE</td>
<td>Number of CLOSE CURSOR statements (QXCLOSE or QPCLOSE)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting SQL Report, this value is the average number of CLOSE CURSOR statements processed per plan execution. The counter is incremented when a CLOSE CURSOR statement is processed for the application. The count between a server and requester may not be equal.</td>
</tr>
<tr>
<td>DML ALL</td>
<td>Total number of SQL DML statements executed</td>
</tr>
</tbody>
</table>

### Thread identification

This section describes the thread identification section of the Accounting detail trace—long report (BACCTLT).

**Figure 54: Thread identification**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THRD TSTAMP</td>
<td>Store clock value of the time when the record was generated</td>
</tr>
<tr>
<td>BEGIN TIME</td>
<td>Beginning store clock value for the period covered by the record (QWACBSC)</td>
</tr>
<tr>
<td>END TIME</td>
<td>Date and time each thread terminated (QWACESC)</td>
</tr>
</tbody>
</table>

Table 68 on page 215 describes the fields in the thread identification section.

**Table 68: Identification field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THRD TSTAMP</td>
<td>Store clock value of the time when the record was generated</td>
</tr>
<tr>
<td>BEGIN TIME</td>
<td>Beginning store clock value for the period covered by the record (QWACBSC)</td>
</tr>
<tr>
<td>END TIME</td>
<td>Date and time each thread terminated (QWACESC)</td>
</tr>
</tbody>
</table>
### Accounting report fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUESTER</td>
<td>Location name of the requester</td>
</tr>
<tr>
<td>REQ PROD ID</td>
<td>Product ID</td>
</tr>
<tr>
<td>REQ PROD VER</td>
<td>Product version number</td>
</tr>
<tr>
<td>REQ ACCT STR</td>
<td>The z/OS accounting string associated with the DB2 SQL application's z/OS address space</td>
</tr>
<tr>
<td>PRIMAUTH</td>
<td>Primary authorization ID from a connection or signon</td>
</tr>
<tr>
<td>ORIGAUTH</td>
<td>Original authorization ID</td>
</tr>
<tr>
<td>CORRNAME</td>
<td>Correlation name obtained by translating the correlation ID into correlation name and number</td>
</tr>
<tr>
<td>CONNECT</td>
<td>Connection name (QWHCCN)</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>Plan name of the application program, transaction, or utility executed (QWHCPLAN)</td>
</tr>
<tr>
<td>FRST PKG</td>
<td>First package in the rollup</td>
</tr>
<tr>
<td>LUWID</td>
<td>LU network name, a LUW instance number, and a commit sequence number</td>
</tr>
<tr>
<td>LUW SEQ</td>
<td>LUW sequence number, which identifies the last commit scope in which the logical unit participated</td>
</tr>
<tr>
<td>ENDUSER</td>
<td>User ID of the workstation end user</td>
</tr>
<tr>
<td>TRANSACT</td>
<td>Transaction or application name that the end user is running</td>
</tr>
<tr>
<td>WSNAME</td>
<td>End user's workstation name</td>
</tr>
</tbody>
</table>

### Times (class 1)—elapsed time distribution

This topic describes the Times (class 1)—elapsed time distribution section of the Accounting summary—long report (BACCTDR).

**Figure 55: Times (class 1)—elapsed time distribution**

```
<table>
<thead>
<tr>
<th>APPL</th>
<th>35 %</th>
<th>----------------------------------------</th>
<th>------------------------</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2</td>
<td>23 %</td>
<td>----------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>SUSP</td>
<td>42 %</td>
<td>----------------------------------------</td>
<td>-------------------------</td>
</tr>
</tbody>
</table>
```

Table 69 on page 217 describes the fields in the Times (class 1)—elapsed time distribution section.
### Table 69: Times (class 1)—elapsed time distribution field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPL</td>
<td>Ratio of the elapsed application time expressed as a percentage of the total elapsed time</td>
</tr>
<tr>
<td>DB2</td>
<td>Ratio of the elapsed DB2 time expressed as a percentage of the total elapsed time</td>
</tr>
<tr>
<td>SUSP</td>
<td>Ratio of the DB2 suspension time expressed as a percentage of the total elapsed time</td>
</tr>
</tbody>
</table>

### Times (class 2)—time distribution

This topic describes the Times (class 2)—time distribution section of the Accounting summary—long report (BACCTDR).

**Figure 56: Times - class 2 - time distribution**

<table>
<thead>
<tr>
<th>CLASS 2 TIME DISTRIBUTION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU 10 %</td>
<td></td>
</tr>
<tr>
<td>NOTACC 26 %</td>
<td></td>
</tr>
<tr>
<td>SUSP 64 %</td>
<td></td>
</tr>
</tbody>
</table>

Table 70 on page 217 describes the fields in the Times (class 2)—time distribution section.

### Table 70: Times (class 2)—time distribution field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Agent DB2 CPU time, expressed as a percentage of the DB2 elapsed time</td>
</tr>
<tr>
<td>NOTACC</td>
<td>DB2 not accounted time, expressed as a percentage of the DB2 elapsed time</td>
</tr>
<tr>
<td>SUSP</td>
<td>Agent DB2 suspension time, expressed as a percentage of the DB2 elapsed time</td>
</tr>
</tbody>
</table>

### Times (class 1)—application time

This topic describes the Times (class 1)—application time section of the Accounting summary—long report (BACCTDR).

**Figure 57: Times (class 1)—application time**

```
AVERAGE APPL (CLASS 1)
---------
ELAPSED TIME 0:01:19.088385
NONNESTED 0:01:18.429711
STORED PROC 0.658674
UDF 0.000000
TRIGGER 0.000000
CPU TIME 0:00:00.115154
AGENT 0.115154
```
Table 71 on page 218 describes the fields in the Times (class 1)—application time section.

### Table 71: Times (class 1)—application time field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELAPSED TIME</td>
<td>Elapsed time from the first connect to DB2 to thread termination (QWACESC-QWACBSC)</td>
</tr>
<tr>
<td></td>
<td>The time a thread was inactive waiting for work is included in this value. This value is not accurate for threads that do not terminate, such as a CICS conversational transaction or an IMS WFI BMP.</td>
</tr>
<tr>
<td>NONNESTED</td>
<td>Class 1 time for nonnested activity of the allied agent</td>
</tr>
<tr>
<td></td>
<td>This time does not include the time spent in stored procedures, user-defined functions, or triggers.</td>
</tr>
<tr>
<td>STORED PROC</td>
<td>Total elapsed time spent in stored procedures, including time spent executing SQL (QWACSPEA)</td>
</tr>
<tr>
<td>UDF</td>
<td>Total elapsed time spent in user-defined functions, including time spent executing SQL (QWACUDEA)</td>
</tr>
<tr>
<td></td>
<td>This time is collected with accounting class 1 active.</td>
</tr>
<tr>
<td>TRIGGER</td>
<td>Accumulated elapsed time used while executing under the control of triggers (QWACTRET)</td>
</tr>
<tr>
<td>CPU TIME</td>
<td>CPU time from MVS (QWACEJST-QWACBJST)</td>
</tr>
<tr>
<td></td>
<td>This number is the MVS CPU time as reported from all calling sources, such as CICS, IMS or TSO. It includes both the main task and all parallel tasks. Zeros indicate no time is available. This number represents the MVS CPU time for the application. It is calculated by subtracting the beginning CPU time from the ending CPU time.</td>
</tr>
<tr>
<td></td>
<td>This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CPU TIME AGENT</td>
<td>Allied agent’s class 1 CPU time (in DB2)</td>
</tr>
<tr>
<td></td>
<td>It comprises the class 1 CPU time of the allied agent, which may include the accumulated class 1 CPU time for processing stored procedures, user-defined functions, and triggers if present. CPU time for processing parallel tasks is not charged to this counter.</td>
</tr>
<tr>
<td>CPU TIME NONESTED</td>
<td>Class 1 CPU time of the allied agent's nonnested activity</td>
</tr>
<tr>
<td>CPU TIME STORED PRC</td>
<td>TCB time spent processing SQL stored procedure CALL statements (QWACSPCP)</td>
</tr>
<tr>
<td></td>
<td>This time reflects the TCB time for SQL CALL statements which reference stored procedures in the stored procedures address space or a WLM address space. This time is collected with accounting class 1 active.</td>
</tr>
<tr>
<td></td>
<td>This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>CPU TIME UDF</td>
<td>Accumulated CPU time used to satisfy user-defined function requests processed in WLM address (QWACUDCP)</td>
</tr>
<tr>
<td>CPU TIME TRIGGER</td>
<td>Accumulated TCB time used while executing under the control of triggers (QWACTRTT)</td>
</tr>
<tr>
<td></td>
<td>This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>CPU TIME PAR. TASKS</td>
<td>CPU time spent processing parallel tasks (QWACEJST - QWACBJST)</td>
</tr>
<tr>
<td></td>
<td>This number is the MVS CPU time as reported from all calling sources, such as CICS, IMS, or TSO. It does not include the main task. Zeros indicate no time is available. This number represents the MVS CPU time for the application. It is calculated by subtracting the beginning CPU time from the ending CPU time.</td>
</tr>
<tr>
<td></td>
<td>This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>SUSPEND TIME</td>
<td>Application suspension time spent outside of DB2</td>
</tr>
<tr>
<td>SUSPEND TIME IIP CPU</td>
<td>Accumulated CPU time that is consumed while running on a zIIP in all environments</td>
</tr>
<tr>
<td>SUSPEND TIME IIP CP CPU</td>
<td>Accumulated CPU time that ran on a standard CP for zIIP-eligible work (QWACEZIP)</td>
</tr>
<tr>
<td>SUSPEND TIME TRIG CPU</td>
<td>Accumulated CPU time that is consumed for triggers while running on a zIIP</td>
</tr>
<tr>
<td>SUSPEND TIME STORED PR</td>
<td>Average stored procedure application 1 TCB time</td>
</tr>
</tbody>
</table>

**Times (class 2)—DB2 time**

This topic describes the Times (class 2)—DB2 time section of the Accounting summary—long report (BACCTDR).

**Figure 58: Times (class 2)—DB2 time**

<table>
<thead>
<tr>
<th>AVERAGE</th>
<th>APPL (CLASS 1)</th>
<th>DB2 (CLASS 2)</th>
</tr>
</thead>
</table>
Table 72 on page 220 describes the fields in the Times (class 2)—DB2 time section.

Table 72: Times (class 2)—DB2 time field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELAPSED TIME</td>
<td>Class 2 elapsed time of the allied agent in DB2</td>
</tr>
<tr>
<td>NONNESTED</td>
<td>Elapsed time for nonnested activity in DB2 (QWACASC)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting CPU/Elapsed Time Report, this value is the average elapsed time within DB2 in seconds per plan execution</td>
</tr>
<tr>
<td>STORED PROC</td>
<td>Total elapsed time spent executing SQL in stored procedures (QWACSPEB)</td>
</tr>
<tr>
<td>UDF</td>
<td>Elapsed time that the allied agent spent executing SQL in user defined functions (QWACUDEB)</td>
</tr>
<tr>
<td>TRIGGER</td>
<td>Accumulated elapsed time used for executing triggers under an enclave (QWACTRET)</td>
</tr>
<tr>
<td>CPU TIME</td>
<td>DB2 CPU time (QWACAJST)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting CPU/Elapsed Time Report, this value is the average TCB CPU time consumed within DB2 in seconds per plan execution. This time is the CPU time accumulated when a thread is in DB2. Accounting class 2 must be activated to collect this data. This time does not include any time spent in a stored procedure, which is collected separately. This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>CPU TIME AGENT</td>
<td>Allied agent’s class 2 CPU time in DB2</td>
</tr>
<tr>
<td></td>
<td>This includes the accumulated class 2 CPU time for processing stored procedures, user-defined functions, and triggers.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CPU TIME NONNESTED</td>
<td>Class 2 CPU time consumed by allied agent's nonnested activity</td>
</tr>
<tr>
<td>CPU TIME STORED PROC</td>
<td>TCB time consumed in DB2 for processing SQL statements that were issued by stored procedures</td>
</tr>
<tr>
<td>CPU TIME UDF</td>
<td>CPU time consumed in DB2 for processing SQL statements that were issued by user-defined functions</td>
</tr>
<tr>
<td>CPU TIME TRIGGER</td>
<td>TCB time used when executing under the control of a trigger (QWACTRRTT)</td>
</tr>
<tr>
<td>CPU TIME PAR. TASKS</td>
<td>DB2 CPU time (QWACAJST)</td>
</tr>
<tr>
<td></td>
<td>This time is the CPU time accumulated processing parallel tasks when a thread is in DB2. Accounting class 2 must be activated to collect this data. This time does not include any time spent in a stored procedure, which is collected separately. This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>SUSPEND TIME AGENT</td>
<td>Wait time of the allied agent for all types of class 3 suspension</td>
</tr>
<tr>
<td>SUSPEND TIME PAR. TASK</td>
<td>Total suspension time spent for parallel tasks (query CP or Sysplex query parallel tasks, or parallel tasks produced by utilities)</td>
</tr>
<tr>
<td>NOT ACCOUNT</td>
<td>Time not accounted in DB2</td>
</tr>
<tr>
<td></td>
<td>This time is the class 2 waiting time minus the sum of class 3 times.</td>
</tr>
<tr>
<td>DB2 ENT/EXIT</td>
<td>Number of entry or exit events for each user or plan (QWACARNA)</td>
</tr>
<tr>
<td></td>
<td>This value indicates the number of DB2 entry and exit events processed in determining the elapsed and processor times in DB2. This field does not count entry and exit times for stored procedures which are gathered in a different counter. Accounting class 2 must be activated to determine this value.</td>
</tr>
<tr>
<td>EN/EX-STPROC</td>
<td>Number of SQL entry or exit events performed by stored procedures (QWACSPNE)</td>
</tr>
<tr>
<td>EN/EX-UDF</td>
<td>Number of SQL entry/exit events performed by user-defined functions (QWACUDNE)</td>
</tr>
</tbody>
</table>

**Times (class 5)—IFI time**

This topic describes the Times (class 5)—IFI time distribution section of the Accounting summary—long report (BACCTDR).
**Note**

This information is only gathered if accounting class 5 is active.

**Figure 59: Times (class 5)—IFI time**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELAPSED TIME</td>
<td>Elapsed time processing IFI calls (QIFAAIET)</td>
</tr>
<tr>
<td></td>
<td>This value is the elapsed time processing Instrumentation Facility Interface READA and READS requests to process DB2 trace data. This information is only gathered if accounting class 5 is active.</td>
</tr>
<tr>
<td>CPU TIME</td>
<td>CPU time processing IFI calls (QIFAAIIT)</td>
</tr>
<tr>
<td></td>
<td>This value is the CPU time consumed processing Instrumentation Facility READA and READS requests to process DB2 trace data.</td>
</tr>
<tr>
<td>AGENT</td>
<td>Accumulated CPU time spent processing IFI calls (QIFAAIIT)</td>
</tr>
<tr>
<td></td>
<td>This time is the same as the TCB time (class 5).</td>
</tr>
</tbody>
</table>

Table 73 on page 222 describes the fields in the Times (class 5)—IFI time section.
**Field** | **Description**
--- | ---
DCAPII DESCR | Elapsed time processing data capture describes (QIFAAMBT)
This value is the elapsed time processing data capture describe information during "IFI READS" calls for IFCID 185 (DB2 data capture before and after image data). The DB2 catalog must be accessed to obtain this information which describes data in log records.
**Tuning Tip:** The data capture facility can be used for hot site disaster recovery or sophisticated audit mechanisms. This field is associated with the time spent gathering the log record data in IFCID 185.

LOG EXTRACT | Elapsed time extracting log data for IFCID 185 (QIFAAMLT)
This value is the elapsed time processing log records as a result of IFI READS calls for IFCID 185 (data capture before and after image log data). This time is associated with the elapsed time processing data capture describes.
**Tuning Tip:** The data capture facility can be used for hot site disaster recovery or sophisticated audit mechanisms. This field is associated with the time spent gathering the log record data capture describes in IFCID 185.

---

**Times (class 3)—suspensions**

This topic describes the Times (class 3)—suspensions section of the Accounting summary—long report (BACCTDR).

**Figure 60: Times (class 3)—suspensions**

<table>
<thead>
<tr>
<th>CLASS 3 WAIT</th>
<th>AVERAGE TIME</th>
<th>AVG EVNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>LATCH</td>
<td>0:00:00.000169</td>
<td>0.50</td>
</tr>
<tr>
<td>SYNC I/O</td>
<td>0:00:00.218664</td>
<td>101.50</td>
</tr>
<tr>
<td>DATABASE I/O</td>
<td>0:00:00.218664</td>
<td>102</td>
</tr>
<tr>
<td>LOG/WRT I/O</td>
<td>0:00:00.000000</td>
<td>0</td>
</tr>
<tr>
<td>OTHER READ</td>
<td>0:00:00.037821</td>
<td>14.00</td>
</tr>
<tr>
<td>OTHER WRITE</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>SER.TASK SWTCH</td>
<td>0:00:00.085077</td>
<td>3.50</td>
</tr>
<tr>
<td>UPDATE COMMIT</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>OPEN/CLOSE</td>
<td>0:00:00.065291</td>
<td>1.50</td>
</tr>
<tr>
<td>SYSLGRNG REC</td>
<td>0:00:00.006252</td>
<td>0.50</td>
</tr>
<tr>
<td>EXT/DEL/DEF</td>
<td>0:00:00.013534</td>
<td>1.50</td>
</tr>
<tr>
<td>OTHER SERVICE</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>ARC.LOG(QUIES)</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>ARC.LOG READ</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>DRAIN LOCK</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>CLAIM RELEASE</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>PAGE LATCH</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>NOTIFY MSGS</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>GLOBAL CONT</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>ASYNC CF REQ</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>TCP/IP LOB</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>CMT PH1 WRT</td>
<td>0:00:00.000000</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL CL 3</td>
<td>0.341562</td>
<td>119</td>
</tr>
</tbody>
</table>

Table 74 on page 224 describes the fields in the Times (class 3)—suspensions section.
### Table 74: Times (class 3)—suspensions field descriptions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK</td>
<td>The lock time</td>
</tr>
<tr>
<td>LATCH</td>
<td>Wait time due to latch contention (QWACAWLH, QWACARNL)</td>
</tr>
<tr>
<td>SYNC I/O</td>
<td>Wait time for synchronous I/O (QWACAWTI)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Accounting CPU/Elapsed Time Report, this value is the average elapsed time waiting for I/O to complete in seconds per plan execution. This value indicates the elapsed time spent waiting for all synchronous I/O. Accounting class 3 must be activated to determine this value.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: Most of the time included in this value is synchronous read time, but under stress conditions it can reflect synchronous write time (when immediate write threshold is reached). During heavy update activity, it also can reflect wait for synchronous log I/O.</td>
</tr>
<tr>
<td>SYS/GRNG REC</td>
<td>Accumulated wait time for a synchronous execution unit switch to the DB2 SYS/GRNG recording service (QWAXSLSE) and the number of wait trace events processed for waits for synchronous execution unit switching to the SYS/GRNG recording service (QWAXSLNS)</td>
</tr>
<tr>
<td></td>
<td>This service is also sometimes used for level ID checking for down-level detection.</td>
</tr>
<tr>
<td>EXT/DEL/DEF</td>
<td>Accumulated wait time for a synchronous execution unit switch to the DB2 data space manager services (QWAXDSS)</td>
</tr>
<tr>
<td></td>
<td>This value includes DEFINE DATA SET, EXTEND DATA SET, DELETE DATA SET, and RESET DATA SET. This value is an average.</td>
</tr>
<tr>
<td>OTHER READ</td>
<td>Accumulated waiting time due to a read I/O that performed under a thread other than the one being reported (QWACAWTR)</td>
</tr>
<tr>
<td>OTHER WRITE</td>
<td>Wait time for write I/O (QWACAWTW)</td>
</tr>
<tr>
<td></td>
<td>This value is the time spent waiting for an asynchronous write I/O to complete or for synchronous write I/O to be performed for another thread.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: Time reflected here should be small, because normal checkpoint and deferred write thresholds protect threads from waiting for asynchronous write time. If this number is large, the buffer pool size or deferred write threshold might need to be adjusted. Accounting class 3 must be activated to obtain this time.</td>
</tr>
<tr>
<td>SER.TASK SWTCH</td>
<td>Wait time for DB2 services</td>
</tr>
<tr>
<td></td>
<td>This value is the time spent waiting for special DB2 services. A synchronous execution unit switch is done from the thread to one of the DB2 service tasks. Service times reported here are a summary of each of the following wait values. Accounting class 3 must be activated to obtain these times:</td>
</tr>
<tr>
<td></td>
<td>— COMMIT/UPDATE (QWACAWTE)</td>
</tr>
<tr>
<td></td>
<td>— OPEN/CLOSE (QWAXOCSE)</td>
</tr>
<tr>
<td></td>
<td>— SYS/NG REC (QWAXSLSE)</td>
</tr>
<tr>
<td></td>
<td>— DEFINE/EXTEND/DELETE (QWAXDSSE)</td>
</tr>
<tr>
<td></td>
<td>— OTHER (QWAXOTSE)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ARC.LOG(QUIES)</td>
<td>Wait time for log quiesce (QWACALOG or QWAXALOG) This value is the time spent waiting for an -ARCHIVE LOG MODE(QUIESCE) to take place. This process externalizes buffers and switches the active log data set. Time reflected here is the time the thread waited not the time for the command to complete. Accounting class 3 must be activated to obtain this time.</td>
</tr>
<tr>
<td>ARC.LOG READ</td>
<td>Wait time for archive read from tape (QWACAWAR or QWAXAWAR) This value is the amount of time spent waiting for reads from an archive tape. Time spent waiting for an archive tape is either for the completion of the RECOVER utility or for an application program, which has not committed, to read the archive tape in order to complete backout. Accounting class 3 must be activated to obtain this time. <strong>Tuning Tip</strong>: If this time is large, the application program should commit more often. It might also make sense to increase the size and number of active logs.</td>
</tr>
<tr>
<td>STOR.PRC SCHED</td>
<td>Wait time for SPAS TCB scheduling (QWACAST) This time is the elapsed time spent waiting for an available TCB in the Stored Procedures Address Space to become available for scheduling a stored procedure. <strong>Tuning Tip</strong>: This time should be minimal depending on the workload to the Stored Procedures Address space. It is calculated only if accounting class 3 is active.</td>
</tr>
<tr>
<td>UDF SCHEDULE</td>
<td>Total elapsed time spent for user-defined functions to execute SQL (QWACUDEB) This number is calculated only if accounting class 3 is active.</td>
</tr>
<tr>
<td>DRAIN LOCK</td>
<td>Wait time for drain lock (QWACAWDR or QWAXAWDR) This value is the time spent by a requester of a drain lock, such as a utility or command, waiting to acquire that lock. Processes, such as utilities that serialize events to page sets, must acquire a drain lock. This value is the time spent waiting for this event. Accounting class 3 must be activated to obtain this time.</td>
</tr>
<tr>
<td>CLAIM RELEASE</td>
<td>Wait time for claim release (QWACAWCL or QWAXAWCL) This value is the time spent by the holder of a drain lock waiting for SQL claimers to complete their activity. Drainers must wait until the SQL claim count reaches zero. This value is the time spent waiting for them to clear. Accounting class 3 must be activated to obtain this time.</td>
</tr>
<tr>
<td>PAGELATCH</td>
<td>Wait time for page latch contention (QWACAWTP) This value is the time spent waiting for page latching activities due to lock avoidance. Accounting class 3 must be activated to obtain this time. <strong>Tuning Tip</strong>: Page latching can be avoided by scheduling applications when there is a lower likelihood of latch contention.</td>
</tr>
<tr>
<td>NOTIFY MSGS</td>
<td>Wait time for data sharing notify messages (QWACAWTG) This value is the wait time for sending notify messages to another data sharing member. When tables in a data sharing group are CREATed, ALTERed, or DROPped in a data sharing group, intersystem messages must be sent to update the database descriptors (DBDs) in the other members’ EDM pools. This value is the time spent waiting for this message traffic to occur. This time is collected only when accounting class 3 is activated and data sharing is enabled.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL CONT</td>
<td>Wait time for global lock contention (QWACAWTJ)</td>
</tr>
<tr>
<td></td>
<td>This time is the amount of elapsed time caused by an IRLM lock suspension due</td>
</tr>
<tr>
<td></td>
<td>to global lock contention which requires intersystem communication to resolve.</td>
</tr>
<tr>
<td></td>
<td>This time is collected only when accounting class 3 is activated and data</td>
</tr>
<tr>
<td></td>
<td>sharing is enabled.</td>
</tr>
<tr>
<td>FORCE-AT-COMM</td>
<td>Accumulated wait time for phase 1 commit write I/O (QWAXAWFC)</td>
</tr>
<tr>
<td>ASYNCH IXL RQ</td>
<td>Accumulated wait time for IXLCACHE and IXLFCOMP requests (QWAXIXLT)</td>
</tr>
<tr>
<td>DATABASE I/O</td>
<td>Accumulated I/O elapsed wait time for database I/O for this thread. This</td>
</tr>
<tr>
<td></td>
<td>field is for synchronous I/O only (QWACAWTI)</td>
</tr>
<tr>
<td></td>
<td>This value includes synchronous read and write I/O. This value is an average.</td>
</tr>
<tr>
<td>LOG/WRT I/O</td>
<td>Accumulated wait time for log write I/O (QWACAWLG)</td>
</tr>
<tr>
<td>TCP/IP LOB</td>
<td>Accumulated wait time for TCP/IP LOB materialization (QWACALBW)</td>
</tr>
<tr>
<td>CMT PH1 WRT</td>
<td>Accumulated time waiting for phase 1 commit write I/O (QWAXAWFC)</td>
</tr>
</tbody>
</table>

### Triggers

This topic describes the Triggers section of the Accounting summary—long report (BACCTDR).

**Figure 61: Triggers**

<table>
<thead>
<tr>
<th>TRIGGERS</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATEMENT TRIGGER</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>ROW TRIGGER</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SQL ERROR OCCUR</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 75 on page 226 describes the fields in the Triggers section.

### Table 75: Triggers field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATEMENT TRIGGER</td>
<td>Number of times a statement trigger is activated (QXSTTRG)</td>
</tr>
<tr>
<td>ROW TRIGGER</td>
<td>Number of times a row trigger is activated (QXROWTRG)</td>
</tr>
<tr>
<td>SQL ERROR OCCUR</td>
<td>Number of times an SQL error occurred during execution of a triggered action (QXTRGERR)</td>
</tr>
</tbody>
</table>

### UDF

This topic describes the User defined functions (UDF) section of the Accounting summary—long report (BACCTDR).
Figure 62: User defined functions

<table>
<thead>
<tr>
<th>UDF</th>
<th>AVERAGE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>ABENDED</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>TIMED OUT</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>REJECTED</td>
<td>0.00</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 67 on page 227 describes the fields in the UDF section of the Accounting Detail report.

Table 76: User defined functions field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTED</td>
<td>Number of user-defined functions executed (QXCAUD)</td>
</tr>
<tr>
<td>ABENDED</td>
<td>Number of times a user-defined function abended (QXCAUDAB)</td>
</tr>
<tr>
<td>TIMED OUT</td>
<td>Number of times a user-defined function timed out waiting to be scheduled (QXCAUDTO)</td>
</tr>
<tr>
<td>REJECTED</td>
<td>Number of times a user-defined function was rejected (QXCAUDRJ)</td>
</tr>
</tbody>
</table>

Statistics report fields

The topics in this section describe statistics report fields that appear in the DB2 Statistics Detail report (BSTATDR), the DB2 Statistics Trace Long report (BSTATLT) and the Virtual Storage Status report (BSTATSTX).

The field names in the statistics reports may vary slightly due to formatting constraints in each report.

The statistics reports consist of sections of information about a particular activity, such as buffer pool activity and locking activity.

Related Information

- “Statistics reports” on page 500
- “DB2 statistics detail report (BSTATDR)” on page 501
- “DB2 statistics trace—long report (BSTATLT)” on page 512
- “Virtual storage status report (BSTATSTX)” on page 525
Authorization management

This topic describes the Authorization management section of the DB2 statistics detail report (BSTATDR).

Figure 63: Authorization management

<table>
<thead>
<tr>
<th>Authorization Management</th>
<th>Quantity</th>
<th>/Minute</th>
<th>/Thread</th>
<th>/Commit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization Attempts</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Authorization Successful</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Auth Succ-Without Catalog</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Auth Succ-Exec to Public</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Auth Succ-Pkg W/O Catalog</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Auth Succ-Pkg-Pub W/O Cat</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Auth Unsucc-Pkg-Cache</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Pkg Cache Overwrt - Authid</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Pkg Cache Overwrt - Entry</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RtN Auth Succ-W/O Catlg</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RtN Auth Succ-Pub W/O Cat</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RtN Auth Unsucc_Cache</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RtN Cache Overwrt Auth</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RtN Cache Overwrt Entry</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RtN Cache Entry Not Added</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 77 on page 228 describes the fields in the Authorization management section.

Table 77: Authorization management field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization Attempts</td>
<td>Number of plan authorization check attempts (QTAUCHK)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time a plan authorization check is performed.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: The authorization check takes place by looking first in the EDM pool cache (specified as CACHESIZE on the BIND operation) and then doing catalog authorization lookups.</td>
</tr>
<tr>
<td>Authorization Successful</td>
<td>Number of successful authorization checks (QTAUSUC)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented each time a plan is checked with a successful result. When the first successful check is done, the AUTHID is stored in the EDM pool SKCT cache. The next attempt does the lookup in the cache before going to the catalog.</td>
</tr>
<tr>
<td>Auth Succ-Without Catalog</td>
<td>Number of successful authorization checks not using the catalog (QTAUCCH)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time a plan was GRANTed to PUBLIC or the authorization ID is found in the EDM pool cache.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: If not granting plans to public, it is desirable to have a large cache size or to use secondary group authorizations.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>AUTH SUCC-EXEC TO PUBLIC</td>
<td>Number of successful authorization checks based on EXECUTE authority GRANTed to PUBLIC (QTAUPUB) This counter is incremented each time the plan’s authorization was GRANTed to PUBLIC. Tuning Tip: This number is useful in determining which mechanism is allowing authorization. GRANTing to PUBLIC is the fastest since a special bit is set that disables further checking.</td>
</tr>
<tr>
<td>AUTH SUCC-PKG W/O CATALOG</td>
<td>Number of times a successful check for package execute authority is made without accessing the catalog (QTPACAUT) This number also includes cache hits, as well as public authorization checks.</td>
</tr>
<tr>
<td>AUTH SUCC-PKG-PUB-W/O CAT</td>
<td>Number of times a successful check for package execute authority is made for a package GRANTed to PUBLIC (QTPACPUB)</td>
</tr>
<tr>
<td>AUTH UNSUCC-PKG-CACHE</td>
<td>Number of times an unsuccessful check for package execute authority is made because an applicable entry was not found in the package authorization cache, requiring catalog access (QTPACNOT)</td>
</tr>
<tr>
<td>PKG CACHE OVERWRT - AUTHID</td>
<td>Number of times an entry for an authorization ID was overwritten in the package authorization cache (QTPACOW1)</td>
</tr>
<tr>
<td>PKG CACHE OVERWRT - ENTRY</td>
<td>Number of times an entry for a package or collection was overwritten in the package authorization cache (QTPACOW2)</td>
</tr>
<tr>
<td>RTN_AUTH SUCC-W/O CATLG</td>
<td>Number of successful authorization checks for user-defined functions or stored procedures that use the routine authorization cache (QTRACAUT) This number includes the number of public authorization checks (QTRACPUB)</td>
</tr>
<tr>
<td>RTN_AUTH SUCC-PUB W/OCAT</td>
<td>Number of successful authorization checks for user-defined function or stored procedure execution authority when that authority is held by public (QTRACPUB)</td>
</tr>
<tr>
<td>RTN_AUTH UNSUCC_CACHE</td>
<td>Number of authorization checks for user-defined function or stored procedure execution authority that could not use the routine authorization cache (QTRACNOT)</td>
</tr>
<tr>
<td>RTN CACHE OVERWRT AUTH</td>
<td>Number of times that DB2 wrote over an authorization ID in the routine authorization cache (QTRACOW1)</td>
</tr>
<tr>
<td>RTN CACHE OVERWRT ENTRY</td>
<td>Number of times that DB2 wrote over a routine entry in the routine authorization cache (QTRACOW2)</td>
</tr>
<tr>
<td>RTN CACHE ENTRY NOT ADDED</td>
<td>Number of times that DB2 could not add an entry to the routine authorization cache (QTRACNAC)</td>
</tr>
</tbody>
</table>

**Buffer pool general**

This topic describes the Buffer pool general section of the DB2 statistics detail report (BSTATDR).

**Figure 64: Buffer pool general**
### Table 78: Buffer pool general field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE ACTIVE BUFFERS</td>
<td>Number of current active (nonstealable) buffers (QBSTCBA)</td>
</tr>
<tr>
<td></td>
<td>This value is a snapshot look at the current number of pages that are in use or updated and not yet written to DASD.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If the number of non-stealable buffers is regularly greater than 50%, consider increasing the virtual pool size. If greater than 80%, the pool is in danger of reaching the 90% sequential prefetch shutoff mechanism. In a typical online system, this number tends to be small. But in a batch or combined online and batch environment, this number can become large if any application fails to commit. If increasing the size of the pool is not a viable option (because no memory exists to support it), consider increasing the commit frequency of applications to free committed pages.</td>
</tr>
<tr>
<td>UNAVAIL BUF-VPOOL FULL</td>
<td>Number of times virtual buffer pool was full (QBSTXFL)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 attempts to perform a GETPAGE but could not find a free buffer in the virtual buffer pool because it was full of updated or in-use pages.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation is a worst-case scenario situation. DB2 will have hit many other thresholds that cause poor performance before this situation occurs. This number should always be zero. If a buffer cannot be found, DB2 synchronously waits until one has been freed. The system tuner should seriously consider increasing the size of the virtual buffer pool or removing some of the page sets allocated to it.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>NUMBER OF DATASET OPENS</td>
<td>Number of data sets physically opened (QBSTDSO)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented each time a page set is physically opened.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> MVS OPEN processing of a VSAM data set can be extremely expensive. The goal is to keep frequently used page sets open. While every page set must be opened at least once, the goal is to keep the heavily used page sets open as long as possible. DB2 uses a pseudo-close technique to avoid physical closes. DB2 reduces the possible impact on recovery of large numbers of open data sets by internally shifting the R/W nature of the page set to read-only if no activity has taken place in the last five checkpoints or 60 minutes.</td>
</tr>
<tr>
<td>BUFFERS ALLOCATED-VPOOL</td>
<td>Number of buffers allocated for a virtual buffer pool (QBSTVPL)</td>
</tr>
<tr>
<td></td>
<td>This number is a snapshot of the number of pages allocated in central storage to support the virtual buffer pool.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> DB2 allocates pages as needed in the DBM1 address space up to the VPSIZE parameter of that buffer pool. This number can be dynamically altered by issuing the - ALTER BUFFERPOOL command.</td>
</tr>
<tr>
<td>BUFFERS ALLOCATED-HPOOL</td>
<td>Number of buffers allocated for a hiperpool (QBSTHPL)</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This field is no longer supported and will be removed in a future release of MainView for DB2</td>
</tr>
<tr>
<td></td>
<td>This number is a snapshot of the number of pages allocated in expanded storage to support the hiperpool.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> DB2 allocates pages in expanded storage up to the HPSIZE of the buffer pool. This number can be dynamically altered by issuing the -ALTER BUFFERPOOL command.</td>
</tr>
<tr>
<td>HPOOL BUFFERS BACKED</td>
<td>Number of hiperpool buffers backed by expanded storage (QBSTHBE)</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This field is no longer supported and will be removed in a future release of MainView for DB2</td>
</tr>
<tr>
<td></td>
<td>This number reflects the current number of buffers which have expanded storage available to back the hiperpool allocated size. However, for hiperpools defined with CASTOUT=YES (the recommended default), this number can include MVS stolen page frames if DB2 did not subsequently attempt to access the buffers.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Generally the CASTOUT parameter should be left to YES because of the severe MVS constraints which occur when expanded storage is not available for MVS paging. However, care should be used to not overallocate hiperpools.</td>
</tr>
<tr>
<td>DFHSM MIGRATED DATASETS</td>
<td>Number of times migrated data sets were encountered (QBSTMIG)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 encounters a page set that has been archived and it must be migrated back.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> In general, allowing archiving of production data is not recommended, as the cost of tape mounts and recall slow the application. It may be cost effective to allow tables to migrate in a test or System UAT environment. If this situation occurs frequently, consider changing the migration rules for DB2 data sets.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DFHSM RECALL TIMEOUTS</td>
<td>This counter is incremented when DB2 attempts to recover a migrated page set and must wait longer than the Recall Delay parameter (RECALLD). If DFSMS or an equivalent product fails to recover a migrated data set, DB2 times out the recall request. The default recall delay time is 120 seconds.</td>
</tr>
<tr>
<td>HPOOL EXPAND/CONTRACT</td>
<td>This number is incremented each time storage for a hiperpool is allocated or freed when the ALTER BUFFERPOOL command is issued and the operation succeeds.</td>
</tr>
<tr>
<td>VPOOL/HPOOL EXP FAILURE</td>
<td>This counter is incremented every time DB2 attempts to GETMAIN more central or expanded storage and fails to find memory to satisfy the request.</td>
</tr>
<tr>
<td>CONCUR PREF I/O - HWM</td>
<td>This number indicates the maximum number of I/O streams running in parallel to satisfy a query. It does not apply to work files.</td>
</tr>
<tr>
<td>PREF I/O STREAM REDUCED</td>
<td>This counter is incremented when the number of buffers already reserved for sequential processing has been used and no more processes can be started. It does not apply to work files.</td>
</tr>
<tr>
<td>PARALLEL QUERY REQUESTS</td>
<td>This counter is incremented each time parallel processing is requested for this virtual buffer pool, not including parallel work file support.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARALL QUERY REQ REDUCED</td>
<td>Total number of parallel groups reduced--buffer shortage (QBSTPQF)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented at execution time when DB2 finds enough parallel sequential buffers have not been reserved to support the parallel operation.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If this situation occurs, the VPPSEQT parameter should be increased; the VPSIZE also may need to be increased.</td>
</tr>
<tr>
<td>PREF QUANT REDUCED 1/2</td>
<td>Number of times prefetch quantity reduced to 1/2 (QBSTPL1)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 has to reduce the prefetch quantity by 50% because too many parallel tasks have reduced the amount of buffer storage available for sequential processing. For example, instead of getting 32 pages per prefetch, only 16 pages are prefetched.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Generally, non-zero numbers are undesirable as it indicates there are too many concurrent prefetch processes for parallel processing. This is impacting the effectiveness of prefetch by increasing I/Os. Consider reducing the VPPSEQT or increasing the VPSIZE of the buffer pool.</td>
</tr>
<tr>
<td>PREF QUANT REDUCED 1/4</td>
<td>Number of times prefetch quantity reduced to 1/4 (QBSTPL2)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 has to reduce the prefetch quantity by 75% because too many parallel tasks have reduced the amount of buffer storage available for sequential processing. For example, instead of getting 32 pages per prefetch, only 8 pages are prefetched.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This condition is serious. Either reduce the VPPSEQT or increase the total VPSEQT or the VPSIZE of the buffer pool. Parallel processing should not be allowed to reduce the prefetch amount since that defeats the purpose of bringing as many pages into storage as possible.</td>
</tr>
</tbody>
</table>

## Buffer pool read operations

This topic describes the Buffer pool read operations section of the DB2 statistics detail report (BSTATDR).

**Figure 65: Buffer pool read operations**

### Table: Buffer pool read operations

<table>
<thead>
<tr>
<th>BPO READ OPERATIONS</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>GETPAGE REQUESTS</td>
<td>21</td>
<td>0.70</td>
<td>21.00</td>
<td>21.00</td>
</tr>
<tr>
<td>GETPAGE REQUEST-SEQUENTIAL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GETPAGE REQUEST-RANDOM</td>
<td>21</td>
<td>0.70</td>
<td>21.00</td>
<td>21.00</td>
</tr>
<tr>
<td>SYNCHRONOUS READS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHRON READS-SEQUENTIAL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHRON READS-RANDOM</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GETPAGE PER SYNCH READS</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEQUENT’L PREFETCH REQUEST</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SEQUENTIAL PREFETCH READS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAGES READ VIA SEQ PREF</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>S PRF PAGE READ/S PRF READ</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIST PREFETCH REQUESTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>LIST PREFETCH READS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table 79 on page 234 describes the fields in the Buffer pool read operations section.

**Table 79: Buffer pool read operations field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GETPAGE REQUESTS</strong></td>
<td>Number of getpage requests (QBSTGET)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report--averages, this value is the average</td>
</tr>
<tr>
<td></td>
<td>number of GETPAGE requests per CREATE THREAD during this statistics interval.</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the Data Manager component of DB2 requests</td>
</tr>
<tr>
<td></td>
<td>a page (hence getpage) from DB2's Buffer Manager. The Buffer Manager first</td>
</tr>
<tr>
<td></td>
<td>looks into one of its virtual buffer pools, next to hiperpools (if any), and</td>
</tr>
<tr>
<td></td>
<td>then does a read from DASD.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The goal in DB2 performance tuning is to keep the ratio of</td>
</tr>
<tr>
<td></td>
<td>getpages to real I/O very high. This number indicates either good sequential</td>
</tr>
<tr>
<td></td>
<td>performance or a re-reference of random data, depending on the application.</td>
</tr>
<tr>
<td><strong>GETPAGE REQUEST—SEQUENTIAL</strong></td>
<td>Number of getpage requests for sequential access (QBSTSGT)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of getpages for all sequential access requesters</td>
</tr>
<tr>
<td></td>
<td>including sequential prefetch, dynamic sequential prefetch, and list prefetch</td>
</tr>
<tr>
<td></td>
<td>operations.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number is useful in determining what the sequential</td>
</tr>
<tr>
<td></td>
<td>steal threshold should be for that buffer pool. This number compared with</td>
</tr>
<tr>
<td></td>
<td>the total number of getpages indicates the environment for random and</td>
</tr>
<tr>
<td></td>
<td>sequential processes. Those two numbers can help to set the VPSEQT parameter.</td>
</tr>
<tr>
<td><strong>GETPAGE REQUEST—RANDOM</strong></td>
<td>Number of getpage requests for random access (QBSTGET - QBSTSGT)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of getpages for all random access requesters.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SYNCHRONOUS READS</td>
<td>Number of synchronous read I/Os (QBSTRIO)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report--averages, this value is the average</td>
</tr>
<tr>
<td></td>
<td>number of read I/Os issued per CREATE THREAD during this statistics interval</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the DB2 Buffer Manager could not</td>
</tr>
<tr>
<td></td>
<td>find a page in global, central, or expanded storage. DB2 must perform a</td>
</tr>
<tr>
<td></td>
<td>physical read of DASD to obtain the necessary data. The application waits</td>
</tr>
<tr>
<td></td>
<td>for DB2 to perform the operation.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Unnecessary read I/Os are one of the principal culprits</td>
</tr>
<tr>
<td></td>
<td>in poorly tuned applications. While random I/O cannot be avoided, critical</td>
</tr>
<tr>
<td></td>
<td>re-referenced indexes and tables can be kept in memory. At other times, the</td>
</tr>
<tr>
<td></td>
<td>strategy is to get the data into memory before the application needs it,</td>
</tr>
<tr>
<td></td>
<td>typically when processing the data pages sequentially. This is done with</td>
</tr>
<tr>
<td></td>
<td>prefetch and possibly with parallel processing.</td>
</tr>
<tr>
<td>SYNCHRON READS—SEQUENTIAL</td>
<td>Number of synchronous I/Os for sequential access (QBSTSIO)</td>
</tr>
<tr>
<td></td>
<td>This count is the number of non-sequential pages found while trying to</td>
</tr>
<tr>
<td></td>
<td>process data sequentially. DB2 must then do random reads.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number can indicate data or index fragmentation. It</td>
</tr>
<tr>
<td></td>
<td>may also indicate buffer pool thrashing. If the pool is too small,</td>
</tr>
<tr>
<td></td>
<td>sequentially read pages may be stolen before being used. They must then be</td>
</tr>
<tr>
<td></td>
<td>read in again.</td>
</tr>
<tr>
<td>SYNCHRON READS—RANDOM</td>
<td>Difference between total read I/O and sequential read I/O during this</td>
</tr>
<tr>
<td></td>
<td>statistics interval (QBSTRIO - QBSTSIO)</td>
</tr>
<tr>
<td>GETPAGE PER SYNCH READS</td>
<td>Number of random getpage requests for each random synchronous read I/O</td>
</tr>
<tr>
<td></td>
<td>request</td>
</tr>
<tr>
<td>SEQUENT'L PREFETCH REQUEST</td>
<td>Number of sequential prefetch requests (QBSTSEQ)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time a DB2 plan calls for a sequential</td>
</tr>
<tr>
<td></td>
<td>prefetch operation, which normally attempts to bring in up to 32 pages per</td>
</tr>
<tr>
<td></td>
<td>read I/O. Sequential prefetch in this context includes only plans which</td>
</tr>
<tr>
<td></td>
<td>have indicated a use of sequential prefetch in their EXPLAINs. Dynamic</td>
</tr>
<tr>
<td></td>
<td>sequential prefetch (where DB2 decides the program is traversing the data</td>
</tr>
<tr>
<td></td>
<td>sequentially and dynamically brings in the next 32 pages requested) is not</td>
</tr>
<tr>
<td></td>
<td>included in this count.</td>
</tr>
<tr>
<td>SEQUENTIAL PREFETCH READS</td>
<td>Number of asynchronous read I/O operations due to normal sequential</td>
</tr>
<tr>
<td></td>
<td>prefetch for applications and utilities (QBSTPIO)</td>
</tr>
<tr>
<td></td>
<td>This value is usually less than the number of sequential prefetch requests</td>
</tr>
<tr>
<td></td>
<td>because the prefetch read I/O is not activated if all pages in the</td>
</tr>
<tr>
<td></td>
<td>prefetch range are already in the buffer pool or if the prefetch is</td>
</tr>
<tr>
<td></td>
<td>canceled.</td>
</tr>
<tr>
<td>PAGES READ VIA SEQ PREF</td>
<td>Number of asynchronous pages read by sequential prefetch (QBSTSPP)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented with the number of pages read using normal</td>
</tr>
<tr>
<td></td>
<td>(not dynamic) sequential prefetch.</td>
</tr>
<tr>
<td></td>
<td><strong>SEQ PREFETCH PAGES READ</strong></td>
</tr>
<tr>
<td>S PRF PAGE READ/S PRF READ</td>
<td>Ratio of the number of sequential prefetch pages read per sequential</td>
</tr>
<tr>
<td></td>
<td>prefetch read I/O (QBSTSPP/QBSTPIO)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| LIST PREFETCH REQUESTS  | Number of list prefetch requests (QBSTLPF)  
This number is incremented each time an access path requires that index keys be sorted into data order using the RID pool. List prefetch can be used with nonmatching index scans and is always used when multiple indexes are used to access tables. It is also used to sort index data during a hybrid join. **Tuning Tip**: At BIND time, DB2 computes whether list prefetch should be activated by estimating the number of index RIDS to be scanned and comparing that to the size of the RID pool. If the number exceeds 50%, DB2 does not activate list prefetch. At execution time, if the object would take more than 25% of the RID pool, DB2 disables list prefetch. If this situation occurs frequently, consider enlarging the RID pool by increasing the MAXRBLK parameter of DSNZPARM on installation panel DSNTIPC. |
| LIST PREFETCH READS     | Number of asynchronous read I/O operations caused by the list sequential prefetch (QBSTLIO)  
This value is usually less than the number of list sequential prefetch requests because the prefetch read I/O is not activated if all of the pages to be prefetched are already in the buffer pool or if the prefetch is canceled. |
| PAGES READ VIA LIST PREF | Number of asynchronous pages read by list prefetch (QBSTLPP)  
This value is a count of the number of index pages read by list prefetch to satisfy nonmatching index scans, multiple index access support, and certain types of join to be read into the RID pool for RID pool support. **Tuning Tip**: DB2, upon sorting the RID list created by list prefetch, will then access the data using sequential prefetch to gain the performance boost of processing the data. This is an asynchronous process not charged to the calling application. |
| L PRF PAGE READ/L PRF READ | Ratio of the number of list prefetch pages read per list prefetch read I/O (QBSTLPP/QBSTLIO)  
Number of dynamic prefetch requests (QBSTDPF)  
This field is incremented every time DB2 determines sequential prefetch should be dynamically activated. DB2 analyzes the data accessed to determine whether the last five of eight pages accessed are in sequential order and the application would be benefited by prefetch. DB2 then turns on sequential prefetch until the pages being accessed are no longer in sequential order. **Tuning Tip**: Normally this situation assists programs by providing read-ahead buffering for processing; GETPAGEs that would have to wait for synchronous I/O now find the page in the buffer pool. This number should be monitored since the more dynamic prefetch requests activated, the more buffer pool resources can be strained. It may be necessary to alter the buffer pool size or sequential steal threshold to handle increased demands of dynamic prefetch. |
| DYNAMIC PREFETCH READS  | Number of asynchronous read I/Os because of dynamic prefetch (QBSTDIO)  
This value is usually less than the number of dynamic prefetch requests because prefetch read I/O is not activated if all of the pages to be prefetched are already in the buffer pool or if the prefetch is canceled. |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGES READ VIA DYN PREFETCH</td>
<td>Number of asynchronous pages read by dynamic prefetch (QBSTDPP)&lt;br&gt;This number is the total number of pages accessed asynchronously using sequential prefetch because DB2 dynamically determined by sequential detection that the application was processing the pages sequentially.&lt;br&gt;&lt;br&gt;<strong>Tuning Tip:</strong> Normally, this process aids performance by having read-ahead buffering of pages in the buffer pool. System tuners and DBAs should be aware of when this happens so the number of pages allocated for sequential processing is adequate to support the workload. The VPSIZE (virtual pool size) and the VPSEQT (virtual pool sequential steal thresholds) are the numbers that should be tuned to support the workload.</td>
</tr>
<tr>
<td>D PRF PAGE READ/D PRF READ</td>
<td>Ratio of the number of dynamic prefetch pages read per dynamic prefetch read I/O (QBSTDPP/QBSTDIO)</td>
</tr>
<tr>
<td>PREF DISABLED—NO BUFFER</td>
<td>Number of times sequential prefetch was disabled because buffers were not available (QBSTSPD)</td>
</tr>
<tr>
<td>PREF DISABLED—NO READ ENG</td>
<td>Number of times sequential prefetch disabled--unavailable read engine (QBSTREE)&lt;br&gt;This counter is incremented when 300 read engines are activated in a DB2 subsystem and another is needed.&lt;br&gt;&lt;br&gt;<strong>Tuning Tip:</strong> This situation should occur rarely and the number should be close to zero. Since the 300 read engine limit is hard coded, the only solution is to spread out the workload over a longer period of time so that the number of read engines never exceeds 300.</td>
</tr>
<tr>
<td>PAGE-INS REQUIRED FOR READ</td>
<td>Number of page faults experienced when DB2 references a page before starting a read or write operation during this statistics interval (QBSTRPI+QBSTWPI)</td>
</tr>
<tr>
<td>SYNC HPOOL READ</td>
<td>Number of successful synchronous requests to move a page from a hiperpool to a virtual buffer pool (QBSTHRE)</td>
</tr>
<tr>
<td>ASYNC HPOOL READ</td>
<td>Number of pages moved asynchronously from the hiperpool to the virtual buffer pool (QBSTHRA)</td>
</tr>
<tr>
<td>HPOOL READ FAILED</td>
<td>Number of pages for which a synchronous or asynchronous read request failed because the backing-expanded storage page was stolen by the system (QBSTHRF)</td>
</tr>
<tr>
<td>ASYN DA MOVR HPOOL READ-S</td>
<td>Number of pages moved successfully from the hiperpool to the virtual buffer pool by using the Asynchronous Data Mover Facility (ADMF) (QBSTARA)</td>
</tr>
<tr>
<td>ASYN DA MOVR HPOOL READ-F</td>
<td>Number of pages for which a read request, using the asynchronous data mover facility (ADMF), failed because the backing-expanded storage was stolen by the system (QBSTARF)</td>
</tr>
<tr>
<td>BPOOL HIT RATIO (%)</td>
<td>Buffer pool hit ratio with prefetch, calculated as (total Pages - total I/O) / total Pages x 100.0 where:&lt;br&gt;— Total pages is the number of getpage requests (QBSTGET)&lt;br&gt;— Total I/O is the sum of:&lt;br&gt;— Synchronous read I/Os (QBSTRIO)&lt;br&gt;— Asynchronous pages read by sequential prefetch (QBSTSPP)&lt;br&gt;— Asynchronous pages read by list prefetch (QBSTLPP)&lt;br&gt;— Asynchronous pages read by dynamic prefetch (QBSTDPP)</td>
</tr>
</tbody>
</table>
Buffer pool sort/merge

This topic describes the Buffer pool sort/merge section of the DB2 statistics detail report (BSTATDR).

Figure 66: Buffer pool sort/merge

<table>
<thead>
<tr>
<th>BPO</th>
<th>SORT/MERGE</th>
<th>QUANTITY /MINUTE /THREAD /COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX WORKFILES CONCURR USED</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>MERGE PASSES REQUESTED</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>MERGE PASS DEGRADE-LOW BUF</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>WRKFILE REQ REJCTD LOW BUF</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>WRKFILE REQ-ALL MERGE PASS</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>WORKFILE PRF NOT SCHEDULED</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>WORKFILE PAGES TO DESTRUCT</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>WORKFILE PAGES NOT WRITTEN</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td>WORKFILE NOT CREATED NOBUF</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td># TIMES PGS UNLCK CASTOUT</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
<tr>
<td># TIMES I/O ON CASTOUT</td>
<td>0 0.00 0.00 0.00</td>
<td></td>
</tr>
</tbody>
</table>

Table 80 on page 238 describes the fields in the Buffer pool sort/merge section.

Table 80: Buffer pool sort/merge field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX WORKFILES CONCURR USED</td>
<td>Maximum number of work files used (QBSTWFM)</td>
</tr>
<tr>
<td></td>
<td>This number is the high-water mark of the work files used to support DB2 internal sort processing.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Ideally, each work file needs at least 16 buffers to allow DB2 to perform sequential prefetch for a single task. To tune sort, allocate as many work files as practical and isolate the sort activity from other buffer pool operations.</td>
</tr>
<tr>
<td>MERGE PASSES REQUESTED</td>
<td>Total number of merge passes requested for sort (QBSTWFR)</td>
</tr>
<tr>
<td></td>
<td>This number represents the count of how many merge passes were requested from DB2. This amount varies depending on how many work files exist and how many records are being sorted.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> In general, the more work files available, the more efficient DB2 internal sort will be.</td>
</tr>
<tr>
<td>MERGE PASS DEGRADE-LOW BUF</td>
<td>Number of sort merges degraded (QBSTWFF)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented at execution time when DB2 did not find enough buffers to support a sort operation. The number of work files used is less than requested.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> For DB2 to perform efficient prefetch for work files, each work file should have at least 16 dedicated buffers. DB2 calculates current buffer availability and may then limit the maximum work files allowed, degrading the sort.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>WRKFILE REQ-REJCTD LOW BUF</td>
<td><strong>Description</strong>: Total number of work files rejected—not enough buffers (QBSTWFD) &lt;br&gt; <strong>Tuning Tip</strong>: If this number is non-zero, consider moving the DSNDB07 buffer pool to a separate buffer pool with enough resources to support the maximum number of sorts performed during peak period processing.</td>
</tr>
<tr>
<td>WRKFILE REQ-ALL MERGE PASS</td>
<td><strong>Description</strong>: Total number of work files requested for sort merge (QBSTWFT) &lt;br&gt; <strong>Tuning Tip</strong>: For tuning, consider the maximum number of work files requested for all sort activities during peak period processing, which will allow the best throughput for sort processing, particularly if the DSNDB07 buffers have been isolated into their own buffer pool.</td>
</tr>
<tr>
<td>WORKFILE PRF NOT SCHEDULED</td>
<td><strong>Description</strong>: Number of times sequential prefetch for sort disabled due to a prefetch quantity of zero (QBSTWKPD) &lt;br&gt; <strong>Tuning Tip</strong>: This field indicates a shortage of sequential storage in a virtual buffer pool while prefetch is active for sort merge. If this number is high, it indicates this buffer pool needs more storage. To resolve this problem, increase the VPSIZE of the buffer pool, assuming memory is available. Nonzero numbers indicate serious buffer pool shortages that should be dealt with immediately.</td>
</tr>
<tr>
<td>WORKFILE PAGES TO DESTRUCT</td>
<td><strong>Description</strong>: Number of pages for which destructive read was requested (QBSTWDRP) &lt;br&gt; <strong>Tuning Tip</strong>: Because DB2 internal sort uses destructive read (the previous contents of those buffers have been overwritten), you should allocate a separate buffer pool for DB2 sort activity.</td>
</tr>
<tr>
<td>WORKFILE PAGES NOT WRITTEN</td>
<td><strong>Description</strong>: Number of pages removed from deferred write queue for sort (QBSTWBVQ) &lt;br&gt; <strong>Tuning Tip</strong>: This number of pages can be protected by isolating sort (DSNDB07) in its own buffer pool.</td>
</tr>
<tr>
<td>WORKFILE NOT CREATED NOBUF</td>
<td><strong>Description</strong>: Number of times work files exceed buffer pool resources (QBSTMAX) &lt;br&gt; <strong>Tuning Tip</strong>: The best approach, if memory is available, is to dedicate a buffer pool purely for sort operations with a VPSEQT of 100% (sequential steal threshold at 100%). Because sort is a destructive read into the pool and out from the work files (in temporary work spaces in DSNDB07), isolating sort from other buffer activity can enhance the performance of sort while protecting other useful pages in different buffer pools.</td>
</tr>
</tbody>
</table>
Buffer pool write operations

This topic describes the Buffer pool write operations section of the DB2 statistics detail report (BSTATDR).

**Figure 67: Buffer pool write operations**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td># TIMES PGS UNLCK CASTOUT</td>
<td>Number of pages written for castout I/O operations (QBSTPCO)</td>
</tr>
<tr>
<td># TIMES I/O ON CASTOUT</td>
<td>Number of castout I/O operations (QBSTCIO)</td>
</tr>
</tbody>
</table>

### Table 81 on page 241 describes the fields in the Buffer pool write operations section.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUFFER UPDATES</td>
<td>Number of page updates (QBSTSWS)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report—averages, this value is the average number of rows updated in system pages per CREATE THREAD during this statistics interval. This counter is incremented each time a page is updated in the pool. After a page is updated, it is in use until committed or rolled back. If the same page is updated multiple times, each update intent is counted. Also, this count includes not only updates to data pages but also work file pages, so sort activity increases this count. In a data sharing environment, updated pages might cause buffer invalidation in other member DB2s. <strong>Tuning Tip:</strong> This number reflects update activity. Ideally, DB2 writes updated pages asynchronously at a system checkpoint or through deferred write. The goal is to avoid degrading to synchronous writes.</td>
</tr>
<tr>
<td>PAGES WRITTEN</td>
<td>Number of pages written (QBSTPWS)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented with the number of updated pages externalized to DASD. The goal is to see the lowest number of pages written compared to updated pages. This situation indicates that multiple updates are occurring in memory, which is desirable over writes to DASD. <strong>Tuning Tip:</strong> A number of factors affect this ratio including the amount of pages re-used, the buffer pool size, concurrent access, and application design. Buffer pool problems in DB2 generally tend to show up in read inefficiency. Unless page writes are totally random, tuning should be focused on read efficiency. DB2 normally handles write activity appropriately.</td>
</tr>
<tr>
<td>BUFF UPDATE/PAGE WRITTEN</td>
<td>Ratio of the number of page updates to the number of pages written (QBSTSWS/QBSTPWS)</td>
</tr>
<tr>
<td>SYNCHRONOUS WRITES</td>
<td>Number of immediate writes (QBSTIMW)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a buffer pool reaches 97.5% full of non-stealable buffers. DB2 then attempts to schedule all writes synchronously rather than asynchronously. This time is directly charged to all applications that are updating and seriously degrades performance. <strong>Tuning Tip:</strong> This number should be zero. If non-zero, consider increasing the size of the buffer pool or ALTERing the heaviest updated page set to a different buffer pool.</td>
</tr>
<tr>
<td>ASYNCHRONOUS WRITES</td>
<td>Number of asynchronous write I/Os (QBSTWIO)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report—averages, this value is the average number of write I/Os issued per CREATE THREAD during this statistics interval. This number is incremented each time DB2 schedules asynchronous writes through the media manager (VSAM) to DASD. This process generally occurs at system checkpoints or deferred write thresholds. <strong>Tuning Tip:</strong> The number of asynchronous writes should far exceed any synchronous write activity.</td>
</tr>
<tr>
<td>PAGES WRITTEN/WRITE I/O</td>
<td>Number of pages written from the buffer pool to DASD for synchronous or asynchronous write I/O</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>HORIZ DEF WRITE THRESH</td>
<td>Number of times deferred write threshold reached (QBSTDWWT)</td>
</tr>
<tr>
<td></td>
<td>This counter is updated when there are more than 50% (DWQT default value) of updated pages in a virtual buffer pool waiting to be externalized. DB2 starts asynchronously writing the updated pages until the number drops below the threshold.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation can occur during heavy update periods, and by itself is not a sign of serious performance degradation. However, if this number is reached often, it could point to the need to enlarge the virtual pool or hiperpool. The 50% default is modifiable by issuing an -ALTER BUFFERPOOL command for the DWQT threshold.</td>
</tr>
<tr>
<td>VERTI DEF WRITE THRESH</td>
<td>Number of times vertical deferred write threshold reached (QBSTDWV)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a single page set takes up more space than the user-defined vertical deferred write threshold (by default 10%). The goal is to prevent any single data set assigned to a buffer pool from holding on to updated buffers at the expense of the other page sets occupying the pool. Each time this occurs, DB2 writes these buffers to DASD with chained write I/O.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The DBA and system tuner need to know the characteristics of the buffer pool and the page sets assigned to it. If a single page set is assigned to a buffer pool, the vertical deferred write threshold can be raised. The goal is to prevent unnecessary DASD I/O caused by a too-low threshold. In general, if this threshold is reached often, the virtual buffer pool size or vertical deferred write threshold should be increased.</td>
</tr>
<tr>
<td>DM CRITICAL THRESHOLD</td>
<td>Number of times Data Manager Buffer Critical reached (QBSTDMC)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a buffer pool contains 95% or more of nonstealable pages. Sequential prefetch was turned off at 90%. At 95%, DB2 parses rows instead of 4K pages. This situation becomes evident because more than one GETPAGE can be issued for the same page.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation is a sign of serious performance stress on the buffer pool. The choice of fixes are to increase the virtual pool size or to allow fewer updates during a specified time period. At 95%, the CPU overhead to read and write rows becomes extreme and is very noticeable to users.</td>
</tr>
<tr>
<td>WRITE ENGINE NOT AVAIL</td>
<td>Number of times write engine not available (QBSTWEE)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when 300 write engines are activated in a DB2 subsystem and another is needed for asynchronous write I/O.</td>
</tr>
<tr>
<td></td>
<td>This counter is obsolete beginning with DB2 8.1.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation should occur rarely and the number should be close to zero. Because the 300 write engine limit is hard coded in DB2, the only solution available to you is to spread out the workload over a longer period of time so that data externalization does not require more than 300 engines.</td>
</tr>
<tr>
<td>PAGE INS REQ FOR WRITE</td>
<td>Number of page-ins required for write I/O (QBSTWPI)</td>
</tr>
<tr>
<td></td>
<td>This reflects the number of times DB2 had to page in updated pages before writing them to DASD because these pages had been paged out to MVS auxiliary storage.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> In general, any serious paging in a virtual pool is a sign of memory overallocation. Because DB2 will try to write data asynchronously, paging will be less serious than a page-in required for read activity. Nevertheless, if the page-in rate is greater than roughly five pages per second, it can be a sign of serious memory overallocation.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SYNC HPOOL WRITE</td>
<td>Number of pages moved synchronously from the virtual buffer pool to the hiperpool (QBSTHWR)</td>
</tr>
<tr>
<td>ASYNC HPOOL WRITE</td>
<td>Number of pages moved asynchronously from the virtual buffer pool to the hiperpool (QBSTHWA)</td>
</tr>
<tr>
<td>HPOOL WRITE FAILED</td>
<td>Number of pages for which a synchronous or asynchronous write request failed due to a shortage of expanded storage (QBSTHWF)</td>
</tr>
<tr>
<td>ASYN DA MVR HPOOL WRIT-S</td>
<td>Number of pages moved successfully from the virtual buffer pool to the hiperpool by using the asynchronous data mover facility (QBSTAWA)</td>
</tr>
<tr>
<td>ASYN DA MVR HPOOL WRIT-F</td>
<td>Number of times a write request, using the asynchronous mover facility, failed due to the backing-expanded storage being stolen or some other error (QBSTAWF)</td>
</tr>
</tbody>
</table>

**CPU times**

This topic describes the CPU times section of the DB2 statistics detail report (BSTATDR).

**Figure 68: CPU times**

<table>
<thead>
<tr>
<th>CPU TIMES</th>
<th>TCB TIME</th>
<th>SRB TIME</th>
<th>TOTAL TIME</th>
<th>ZIIP TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM SRVCS ADDR SPC</td>
<td>00:00:00:1295</td>
<td>00:00:00:0284</td>
<td>00:00:00:1579</td>
<td>00:00:00:0000</td>
</tr>
<tr>
<td>DATABASE SRVCS ADDR SPC</td>
<td>00:00:00:3359</td>
<td>00:00:00:0302</td>
<td>00:00:00:0661</td>
<td>00:00:00:0007</td>
</tr>
<tr>
<td>IRLM</td>
<td>00:00:00:0000</td>
<td>00:00:00:0477</td>
<td>00:00:00:0477</td>
<td>00:00:00:0000</td>
</tr>
<tr>
<td>DDF ADDRESS SPACE</td>
<td>00:00:00:0050</td>
<td>00:00:00:0024</td>
<td>00:00:00:0074</td>
<td>00:00:00:0000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>00:00:00:2205</td>
<td>00:00:00:0560</td>
<td>00:00:00:0780</td>
<td>00:00:00:0000</td>
</tr>
</tbody>
</table>

Table 82 on page 243 describes the fields in the CPU times section.

**Table 82: CPU times field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCB TIME</td>
<td>TCB CPU time (QWSAEJST)</td>
</tr>
<tr>
<td></td>
<td>This field provides the CPU time for the address space being tracked. The information in the CPU time generally represents time which is not allocated to threads and is therefore usually asynchronous overhead.</td>
</tr>
<tr>
<td></td>
<td>This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>SRB TIME</td>
<td>SRB CPU time (QWSASRBST)</td>
</tr>
<tr>
<td></td>
<td>This field accumulates the CPU time for all SRB tasks assigned to the address space being tracked. Many DB2 events are scheduled as SRBs (service request blocks) for which time can be obtained. They are, therefore, DB2 address space overhead.</td>
</tr>
<tr>
<td></td>
<td>This time does not include zIIP CPU time.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM SRVCS ADDR SPC—TOTAL</td>
<td>Total number of CPU (TCB+SRB) seconds consumed by the DB2 master address space during this statistics interval (QWSAEJST of MSTR+QWSASRBT of MSTR). This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>DATABASE SRVCS ADDR SPC—TOTAL</td>
<td>Total number of CPU (TCB+SRB) seconds consumed by the DB2 database manager address space during this statistics interval (QWSAEJST of DBM+QWSASRBT of DBM). This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>IRLM—TOTAL</td>
<td>Total number of CPU (TCB+SRB) seconds consumed by the IRLM address space during this statistics interval (QWSAEJST of IRLM+QWSASRBT of IRLM). This time does not include zIIP CPU time.</td>
</tr>
<tr>
<td>DDF ADDRESS SPACE—TOTAL</td>
<td>Total number of CPU (TCB+SRB) seconds consumed by the DDF (DIST) address space if DDF is active during this statistics interval (QWSAEJST of DIST+QWSASRBT of DIST). This time does not include zIIP CPU time.</td>
</tr>
</tbody>
</table>

### Data capture

This topic describes the Data capture section of the DB2 statistics detail report (BSTATDR).

#### Table 83: Data capture field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG RECORDS CAPTURED</td>
<td>Number of captured log records (QWSDCDLC)</td>
</tr>
<tr>
<td>LOGREADS PERFORMED</td>
<td>This counter is incremented as log records are passed to the capture exit interface. Any log record can be passed through either the IFI or the stand-alone data capture exit interface.</td>
</tr>
<tr>
<td>LOG RECORDS RETURNED</td>
<td></td>
</tr>
<tr>
<td>DATA ROWS RETURNED</td>
<td></td>
</tr>
<tr>
<td>DESCRIBES PERFORMED</td>
<td></td>
</tr>
<tr>
<td>DATA DESCRIPTIONS RETRNEE</td>
<td></td>
</tr>
<tr>
<td>TABLES RETURNED</td>
<td></td>
</tr>
</tbody>
</table>

Figure 69: Data capture

Table 83 on page 244 describes the fields in the Data capture section.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGREADS PERFORMED</td>
<td>Number of data capture log reads of IFCID 185 (QWSDCDLR)</td>
</tr>
<tr>
<td></td>
<td>IFCID 185 is the specific log record used by the IFI capture facility to return before and after images of updated rows.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> An application program must be written or a program product purchased to use this interface. It issues IFI READS requests for IFCID 185.</td>
</tr>
<tr>
<td>LOG RECORDS RETURNED</td>
<td>Number of captured log records returned (QWSDCDRR)</td>
</tr>
<tr>
<td></td>
<td>This value is a counter DB2 maintains of log records returned through the non-IFI data capture exit.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This counter can be examined to determine the overhead of invoking the capture exit from the logging subsystem.</td>
</tr>
<tr>
<td>DATA ROWS RETURNED</td>
<td>Number of data capture data rows returned (QWSDCDDR)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented by the number of before and after images of specific rows of data returned in IFCID 185. IFCID 185 has a section to parse the data in the row in field QW0185DR.</td>
</tr>
<tr>
<td>DESCRIBES PERFORMED</td>
<td>Number of data capture describes performed (QWSDCDMB)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time DB2 does catalog access to obtain the data column description to fill in the QW0185DD.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This process can be quite costly.</td>
</tr>
<tr>
<td>DATA DESCRIPTIONS RETURNED</td>
<td>Number of data capture descriptions returned (QWSDCDDDD)</td>
</tr>
<tr>
<td></td>
<td>This count is of the number of descriptions returned from the IFI interface. When activated, the columns and their lengths are mapped in field QW0185DD.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This information is obtained from the catalog to allow the user to parse the row data with the data description from the catalog.</td>
</tr>
<tr>
<td>TABLES RETURNED</td>
<td>Number of data capture tables returned to caller (QWSDCDTB)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented for each table description that required a catalog lookup.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This permits the system administrator to determine the number of tables for which the capture facility is activated.</td>
</tr>
</tbody>
</table>

**Data sharing locking**

This topic describes the Data sharing locking section of the DB2 statistics detail report (BSTATDR).

*Figure 70: Data sharing locking*

<table>
<thead>
<tr>
<th>DATA SHARING LOCKING</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK REQUESTS (P-LOCKS)</td>
<td>N/P</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UNLOCK REQUESTS (P-LOCKS)</td>
<td>N/P</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CHANGE REQUESTS (P-LOCKS)</td>
<td>N/P</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCH.XES - LOCK REQUESTS</td>
<td>N/P</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCH.XES - CHANGE REQS</td>
<td>N/P</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCH.XES - UNLOCK REQS</td>
<td>N/P</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table 84 on page 246 describes the fields in the Data sharing locking section.

### Table 84: Data sharing locking field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK REQUESTS (P-LOCKS)</td>
<td>Number of lock requests for P-locks (QTGSLPLK)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a physical lock (P-lock) is acquired in the DB2 data sharing environment at the data set level to allow DB2 to determine whether an object is of inter-DB2 interest. Concurrency is still managed as before with transaction (or logical) locks (L-locks).</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> A P-lock is acquired for the first transaction that accesses an object (table space, index space, partition) but it is owned by the subsystem. Page P-locks are used for row-level locking. Inter-DB2 interest occurs only when at least one DB2 has update interest and one or more others have read interest. P-locks never cause timeouts, as the lock mode can be negotiated.</td>
</tr>
<tr>
<td>UNLOCK REQUESTS (P-LOCKS)</td>
<td>Number of unlock requests for P-locks (QTGSUPLK)</td>
</tr>
<tr>
<td></td>
<td>This number represents the number of IRLM unlock requests because a page set is no longer in use. This number represents the number of times a page set has been unlocked in a data sharing environment.</td>
</tr>
<tr>
<td>CHANGE REQUESTS (P-LOCKS)</td>
<td>Number of change requests for P-locks (QTGSCPLK)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a P-lock has been established and the IRLM associated with this DB2 determines that the nature of that lock must be changed (for example from share to exclusive) because the usage of the page set in that DB2 has changed.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The number of P-lock changes reflects the changing status of page sets as access modes change and the lock state is negotiated between data sharing members.</td>
</tr>
<tr>
<td>SYNCH.XES - LOCK REQUESTS</td>
<td>Number of XES synchronous lock requests (QTGSLSLM)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented for both L-locks and P-locks when a request for a lock on an object of inter-DB2 interest is sent to MVS Cross-System Services. This occurs synchronously under the user’s execution unit. This number reflects the request for locks of inter-DB2 interest after it is determined that no intrasystem locks exist. This count is not incremented if a suspension occurs.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SYNCH.XES - CHANGE REQ5</td>
<td>Number of XES synchronous change requests (QTGSCSLM)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented for both L-locks and P-locks when a change request for a lock on an object of DB2 intersystem interest is sent to MVS Cross-System Services. This number reflects the number of change requests for locks of inter-DB2 interest. This count is not incremented if a suspension occurs.</td>
</tr>
<tr>
<td>SYNCH.XES - UNLOCK REQ5</td>
<td>Number of XES synchronous unlock requests (QTGSUSLM)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented for both L-locks and P-locks when an unlock request to an object of inter-DB2 interest is sent to MVS Cross-System Services. It is incremented for each resource for which the global lock is released, rather than once for a generic unlock request as is done for local locks. This number reflects all locks which are released through MVS Cross-System Services. This count is not incremented if a suspension occurs.</td>
</tr>
<tr>
<td>ASYNCH.XES - RESOURCES</td>
<td>Number of resources propagated asynchronously to XES (QTGSKIDS)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented whenever a DB2 data sharing P-lock or L-lock (page set lock or row/page lock) is propagated by the IRLM to MVS Cross-System Services asynchronously. This situation occurs when new inter-DB2 interest occurs on a parent resource (such as a page set) or when a request completes after the requester’s execution unit has already been suspended.</td>
</tr>
<tr>
<td>SUSPENDS - IRLM GLOBAL CONT</td>
<td>Number of suspensions due to IRLM global resource contention (QTGSIGLO)</td>
</tr>
<tr>
<td>SUSPENDS - XES GLOBAL CONT</td>
<td>Number of global suspends - XES (QTGSSGLO)</td>
</tr>
<tr>
<td></td>
<td>This counter is a measure of MVS XES global resource contention. MVS XES lock states were in conflict but IRLM lock states were not. XES is aware only of exclusive or share locks, where IRLM has many lock states.</td>
</tr>
<tr>
<td>SUSPENDS - FALSE CONT.</td>
<td>Number of global suspends due to false contention (QTGSFLSE)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time XES detects contention on the resource hash class but there was no real contention on the resource itself.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> MVS Cross-System Services uses a hash lock table in the coupling facility to provide efficient determination of whether a resource is locked. This hash table points to a number of synonyms (different resource names can hash to the same entry). Contention at the hash entry is considered false contention. The more resources declared to be of inter-DB2 interest, the more chances there are of this condition occurring. If false contentions are more than half of the total global contentions (suspensions for IRLM, XES and false), the CF lock structure size may be too small for the workload.</td>
</tr>
<tr>
<td>INCOMPATIBLE RETAINED LOCK</td>
<td>Number of global requests denied due to incompatible retained lock (QTGSDRTA)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time global lock services denies a lock request because an incompatible lock type has been retained on the requested resource. This number reflects the instances in which access to a page or row cannot be obtained because another thread on another system had access to the resource requested but the other system failed. The CF retains locks until the other system comes up to complete the unit of work.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| NOTIFY MESSAGES SENT | Number of notify messages sent (QTGSNTFY)  
This number represents the number of messages passed to the coupling facility so that, for example, other members can be notified that DBDs have been changed due to CREATE, ALTER, or DROP. This is the outbound traffic to the coupling facility. |
| NOTIFY MESSAGES RECEIVED | Number of notify messages received (QTGSNTFR)  
This number represents the number of messages received from the coupling facility. This value is the inbound traffic from the coupling facility. |
| P-LOCK/NOTIFY EXITS ENG. | Maximum number of engines available for lock/notify exit requests (QTGSPEMX)  
This number reflects the number of tasks allocated to tracking intersystem lock negotiation. This number is a count of the facilities available to deal with lock contention from the global DB2 data sharing perspective. |
| P-LOCK/NOT EX ENG. UNAVAIL | Number of times no engine available for lock/notify exit requests (QTGSPEQW)  
This number is incremented when the number of requests for lock or notify exit processing exceeds the maximum number of engines available.  
**Tuning Tip:** This number indicates that there are too many intersystem locking and notification requirements based on the number of resources available for global lock management. It may be appropriate to reduce the number of resources being shared. |
| PSET/PART P-LOCK NEG. | Number of P/P P-lock negotiations (QTGSPPPE)  
This counter is incremented when the participating DB2 has to change the lock type of a page set/partition P-lock because another thread on another system changed its intent on this object from SHARE to EXCLUSIVE or from EXCLUSIVE to SHARE.  
**Tuning Tip:** Each DB2 in a data sharing group may need to change P-locks as part of a negotiation process so that physical locks never cause timeouts or deadlocks. |
| PAGE P-LOCK NEGOTIATION | Number of Page P-lock negotiations (QTGSPGPE)  
This counter is incremented when the participating DB2 has to change a page lock type because another thread on another system has changed its intent on this object from SHARE to EXCLUSIVE or EXCLUSIVE to SHARE. Page P-locks are used for row-level locking.  
**Tuning Tip:** Each DB2 in a data sharing group may need to change P-locks as part of a negotiation process so that physical locks never cause timeouts or deadlocks. |
| OTHER P-LOCK NEGOTIATION | Number of other P-lock negotiations (QTGSOHPE)  
This counter is incremented when anything other than a page set or page lock is negotiated between participating DB2 subsystems. These events represent other contention which may exist other than page set or page P-locks. |
| P-LOCK CHANGE DURING NEG. | Number of P-lock change requests during P-lock negotiation (QTGSCHNP)  
This counter is incremented when a participating DB2 must communicate a lock change request to other DB2s as a result of negotiation for access to an object. This number is a count of the number of P-lock changes issued during P-lock intersystem negotiation. |
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL CONTENTION RATE(%)</td>
<td>Percentage of global lock contentions. This value is calculated as Global Suspends/total Global Locks * 100.0</td>
</tr>
<tr>
<td></td>
<td>- Global Suspends is the total number of global lock contentions (QTGSIGLO + QTGSSGLO + QTGSFLSE).</td>
</tr>
<tr>
<td></td>
<td>- Total Global Locks is the sum of:</td>
</tr>
<tr>
<td></td>
<td>- Lock requests (QTGSLSLM)</td>
</tr>
<tr>
<td></td>
<td>- Change requests (QTGSCSLM)</td>
</tr>
<tr>
<td></td>
<td>- Unlock requests (QTGSUSLM)</td>
</tr>
<tr>
<td></td>
<td>- Global lock contentions (QTGSIGLO + QTGSSGLO + QTGSFLSE)</td>
</tr>
<tr>
<td>FALSE CONTENTION RATE(%)</td>
<td>Percentage of global lock false contentions</td>
</tr>
<tr>
<td></td>
<td>This value is calculated as False Contentions/Global Suspends x 100.0</td>
</tr>
<tr>
<td></td>
<td>- False Contentions is the total number of global lock suspensions due to false contention (QTGSFLSE).</td>
</tr>
<tr>
<td></td>
<td>- Global Suspends is the total number of global lock contentions (QTGSIGLO + QTGSSGLO + QTGSFLSE).</td>
</tr>
<tr>
<td>XES RATE(%)</td>
<td>Percentage of L-lock (transaction lock) requests that have been propagated to z/OS XES synchronously</td>
</tr>
</tbody>
</table>

### DB2 API

This topic describes the DB2 API section of the DB2 statistics detail report (BSTATDR).

**Figure 71: DB2 API**

<table>
<thead>
<tr>
<th>DB2 APPL.PRGR INTERFACE</th>
<th>QUANTITY /MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABENDS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UNRECOGNIZED</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>COMMAND REQUESTS</td>
<td>0.20</td>
<td>6.00</td>
<td>6.00</td>
</tr>
<tr>
<td>READA REQUESTS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>READS REQUESTS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>WRITE REQUESTS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.20</td>
<td>6.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

Table 85 on page 250 describes the fields in the DB2 API section.
### Table 85: DB2 API field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABENDS</td>
<td>Count of IFI abends (QWSDSCA) &lt;br&gt; This field is incremented when an IFI trace call abends for any reason. &lt;br&gt; <strong>Tuning Tip:</strong> IFI abends are accompanied by a reason code on the MSTR address space log and the IFCA of the calling program. The cause should be determined and remedied.</td>
</tr>
<tr>
<td>UNRECOGNIZED</td>
<td>Count of IFI unrecognized functions (QWSDSCU) &lt;br&gt; This field is incremented when an IFI call was made by using an improper argument or parameter list. &lt;br&gt; <strong>Tuning Tip:</strong> The reason code from the IFCA should be examined to determine what parameter was in error using the IFI trace facility.</td>
</tr>
<tr>
<td>COMMAND REQUESTS</td>
<td>Count of IFI command requests (QWSDSCCO) &lt;br&gt; This counter is incremented when a successful IFI command is issued. Many DB2 commands can be issued through the IFI. &lt;br&gt; <strong>Tuning Tip:</strong> One mechanism of submitting DB2 commands (particularly trace commands) is to write a program using the IFI, as documented in the IBM DATABASE 2 Administration Guide.</td>
</tr>
<tr>
<td>READA REQUESTS</td>
<td>Count of IFI READA requests (QWSDSCRA) &lt;br&gt; This counter is incremented when an asynchronous IFI call is made from a monitor program requesting trace data from the IFI. &lt;br&gt; <strong>Tuning Tip:</strong> The counter is useful in determining how many trace requests were made to DB2.</td>
</tr>
<tr>
<td>READS REQUESTS</td>
<td>Count of IFI READS requests (QWSDSCRS) &lt;br&gt; This counter is incremented when synchronous IFI calls are made from a monitor program requesting trace data from the IFI. &lt;br&gt; <strong>Tuning Tip:</strong> This counter is useful in determining how many synchronous data requests were made to DB2.</td>
</tr>
<tr>
<td>WRITE REQUESTS</td>
<td>Count of IFI write requests (QWSDSCWR) &lt;br&gt; This counter is incremented when DB2 writes trace data back to a monitor program as a result of a command, READA, or READS statement. &lt;br&gt; <strong>Tuning Tip:</strong> The number of trace records written, along with their IFCIDs, can be one indicator of trace overhead.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of calls made to IFI</td>
</tr>
</tbody>
</table>

### DB2 commands

This topic describes the DB2 commands section of the DB2 statistics detail report (BSTATDR).

**Figure 72: DB2 commands**

| DB2 COMMANDS | QUANTITY /MINUTE |
Table 86 on page 251 describes the fields in the DB2 commands section.

**Table 86: DB2 commands field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY DATABASE</td>
<td>Number of -DISPLAY DATABASE commands issued (Q9STCTR0)</td>
</tr>
<tr>
<td>DISPLAY THREAD</td>
<td>Number of -DISPLAY THREAD commands issued (Q9STCTR1)</td>
</tr>
<tr>
<td>DISPLAY UTILITY</td>
<td>Number of -DISPLAY UTILITY commands issued (Q9STCTR2)</td>
</tr>
<tr>
<td>DISPLAY TRACE</td>
<td>Number of -DISPLAY TRACE commands issued (Q9STCTRC)</td>
</tr>
<tr>
<td>DISPLAY RLIMIT</td>
<td>Number of -DISPLAY RLIMIT commands issued (Q9STCTRG)</td>
</tr>
<tr>
<td>DISPLAY LOCATION</td>
<td>Number of -DISPLAY LOCATION commands issued (Q9STCTRL)</td>
</tr>
<tr>
<td>DISPLAY ARCHIVE</td>
<td>Number of -DISPLAY ARCHIVE commands issued (Q9STCTRL)</td>
</tr>
<tr>
<td>DISPLAY BUFFERPOOL</td>
<td>Number of -DISPLAY BUFFERPOOL commands issued (Q9STCTRO)</td>
</tr>
<tr>
<td>DISPLAY GROUPBUFFERPOOL</td>
<td>Number of -DISPLAY GROUPBUFFERPOOL commands issued (Q9STCTRT)</td>
</tr>
<tr>
<td>START DATABASE</td>
<td>Number of -START DATABASE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>START TRACE</td>
<td>Number of -START TRACE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>START DB2</td>
<td>Number of -START DB2 commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>START RLIMIT</td>
<td>Number of -START RLIMIT commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>START DDF</td>
<td>Number of -START DDF commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>START PROCEDURE</td>
<td>Number of -START PROCEDURE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>STOP DATABASE</td>
<td>Number of -STOP DATABASE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>STOP TRACE</td>
<td>Number of -STOP TRACE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>STOP DB2</td>
<td>Number of -STOP DB2 commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>MODIFY TRACE</td>
<td>Number of MODIFY TRACE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>CANCEL DDF THREAD</td>
<td>Number of CANCEL DDF commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>TERM UTILITY</td>
<td>Number of TERM UTILITY commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>RECOVER BSDS</td>
<td>Number of RECOVER BSDS commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>RECOVER INDOUBT</td>
<td>Number of RECOVER INDOUBT commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>RESET INDOUBT</td>
<td>Number of RESET INDOUBT commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>RESET GENERICLU</td>
<td>Number of RESET GENERICLU commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>ARCHIVE LOG</td>
<td>Number of ARCHIVE LOG commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>SET ARCHIVE</td>
<td>Number of SET ARCHIVE commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>UNRECOGNIZED CMDS</td>
<td>Number of UNRECOGNIZED CMDS commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>NUMBER START PROFILE CMDS</td>
<td>Number of NUMBER START PROFILE CMDS commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>NUMBER STOP PROFILE CMDS</td>
<td>Number of NUMBER STOP PROFILE CMDS commands issued (Q9STCTSR)</td>
</tr>
<tr>
<td>NUMBER ACCESS DB CMDS</td>
<td>Number of NUMBER ACCESS DB CMDS commands issued (Q9STCTSR)</td>
</tr>
</tbody>
</table>

<p>|                               | TOTAL                                                                 |
|                               | 8 0.27                                                               |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY GROUP</td>
<td>Number of -DISPLAY GROUP commands issued (Q9STCTRXX)</td>
</tr>
<tr>
<td>DISPLAY PROCEDURE</td>
<td>Number of -DISPLAY PROCEDURE commands issued (Q9STCTRU)</td>
</tr>
<tr>
<td>DISPLAY DDF</td>
<td>Number of -DISPLAY DDF commands issued (Q9STCTX5)</td>
</tr>
<tr>
<td>DISPLAY FUNCTION</td>
<td>Number of -DISPLAY FUNCTION commands issued (Q9STCTRZ)</td>
</tr>
<tr>
<td>DISPLAY LOG</td>
<td>Number of -DISPLAY LOG commands issued (Q9STCTX3)</td>
</tr>
<tr>
<td>ALTER BUFFERPOOL</td>
<td>Number of -ALTER BUFFERPOOL commands issued (Q9STCTRN)</td>
</tr>
<tr>
<td>ALTER GROUPBUFFERPOOL</td>
<td>Number of -ALTER GROUPBUFFERPOOL commands issued (Q9STCTRS)</td>
</tr>
<tr>
<td>START DATABASE</td>
<td>Number of -START DATABASE commands issued (Q9STCTR5)</td>
</tr>
<tr>
<td>START TRACE</td>
<td>Number of -START TRACE commands issued (Q9STCTR6)</td>
</tr>
<tr>
<td>START DB2</td>
<td>Number of -START DB2 commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>START RLIMIT</td>
<td>Number of -START RLIMIT commands issued (Q9STCTR8)</td>
</tr>
<tr>
<td>START DDF</td>
<td>Number of -START DDF commands issued (Q9STCTR3)</td>
</tr>
<tr>
<td>START PROCEDURE</td>
<td>Number of -START PROCEDURE commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>START FUNCTION</td>
<td>Number of -START FUNCTION commands issued (Q9STCTRZ)</td>
</tr>
<tr>
<td>STOP DATABASE</td>
<td>Number of -STOP DATABASE commands issued (Q9STCTRI)</td>
</tr>
<tr>
<td>STOP TRACE</td>
<td>Number of -STOP TRACE commands issued (Q9STCTR9)</td>
</tr>
<tr>
<td>STOP DB2</td>
<td>Number of -STOP DB2 commands issued (Q9STCTR9)</td>
</tr>
<tr>
<td>STOP RLIMIT</td>
<td>Number of -STOP RLIMIT commands issued (Q9STCTR8)</td>
</tr>
<tr>
<td>STOP DDF</td>
<td>Number of -STOP DDF commands issued (Q9STCTR8)</td>
</tr>
<tr>
<td>MODIFY TRACE</td>
<td>Number of -MODIFY TRACE commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>CANCEL DDF THREAD</td>
<td>Number of -CANCEL DDF commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>TERM UTILITY</td>
<td>Number of -TERM UTILITY commands issued (Q9STCTRZ)</td>
</tr>
<tr>
<td>RECOVER BSDS</td>
<td>Number of -RECOVER BSDS commands issued (Q9STCTR3)</td>
</tr>
<tr>
<td>RECOVER INDOUBT</td>
<td>Number of -RECOVER INDOUBT commands issued (Q9STCTR4)</td>
</tr>
<tr>
<td>RESET INDOUBT</td>
<td>Number of -RESET INDOUBT commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>RESET GENERICLlU</td>
<td>Number of -RESET GENERICLlU commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>ARCHIVE LOG</td>
<td>Number of -ARCHIVE LOG commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>SET ARCHIVE</td>
<td>Number of -SET ARCHIVE commands issued (Q9STCTR7)</td>
</tr>
<tr>
<td>SET LOG</td>
<td>Number of -SET LOG commands issued (Q9STCTR7)</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNRECOGNIZED CMDS</td>
<td>Number of unrecognized DB2 commands issued (Q9STEROR)</td>
</tr>
<tr>
<td>NUMBER START PROFILE CMDMS</td>
<td>Number of -START PROFILE commands issued (Q9STCTSS)</td>
</tr>
<tr>
<td>NUMBER STOP PROFILE CMDMS</td>
<td>Number of -STOP PROFILE commands issued (Q9STCTST)</td>
</tr>
<tr>
<td>NUMBER ACCESS DB CMDMS</td>
<td>Number of -ACCESS DATABASE commands issued (Q9STCTAD)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of DB2 commands issued</td>
</tr>
</tbody>
</table>

**EDM pool**

This topic describes the EDM pool section of the DB2 statistics detail report (BSTATDR).

**Figure 73: EDM pool**

<table>
<thead>
<tr>
<th>EDM POOL</th>
<th>QUANTITY /MINUTE /THREAD /COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGES IN RDS POOL (BELOW)</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>HELD BY CT</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>HELD BY PT</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>FREE PAGES</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>FAILS DUE TO POOL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>PAGES IN RDS POOL (ABOVE)</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>HELD BY CT</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>HELD BY PT</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>FREE PAGES</td>
<td>0 N/A N/A N/A</td>
</tr>
<tr>
<td>FAILS DUE TO POOL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>PAGES IN DBD POOL (ABOVE)</td>
<td>5850</td>
</tr>
<tr>
<td>HELD BY DBD</td>
<td>97</td>
</tr>
<tr>
<td>FREE PAGES</td>
<td>5753</td>
</tr>
<tr>
<td>FAILS DUE TO DBD PL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>PAGES IN STMT PL (ABOVE)</td>
<td>2500</td>
</tr>
<tr>
<td>HELD BY STATEMENTS</td>
<td>12</td>
</tr>
<tr>
<td>FREE PAGES</td>
<td>2488</td>
</tr>
<tr>
<td>FAILS DUE TO STMT PL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>PAGES IN SKEL PL (ABOVE)</td>
<td>1280</td>
</tr>
<tr>
<td>HELD BY SKCT</td>
<td>4</td>
</tr>
<tr>
<td>HELD BY SKPT</td>
<td>8</td>
</tr>
<tr>
<td>FREE PAGES</td>
<td>1268</td>
</tr>
<tr>
<td>FAILS DUE TO SKEL PL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>CT REQUESTS</td>
<td>265 11.04 1.00 0.92</td>
</tr>
<tr>
<td>CT NOT IN EDMPOOL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>FAILS DUE POOL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>PAGES USED IN STMT POOL</td>
<td>12 0.00 0.04 0.04</td>
</tr>
<tr>
<td>FAILS DUE STMT POOL FULL</td>
<td>0 0.00 0.00 0.00</td>
</tr>
<tr>
<td>PAGES IN EDM STMT POOL</td>
<td>2500 0.00 9.43 8.68</td>
</tr>
<tr>
<td>FREE PAGES IN EDM STMT PL</td>
<td>2488 0.00 9.39 8.64</td>
</tr>
<tr>
<td>PAGES FOR DYN SOL CACHE</td>
<td>N/P 0.00 0.00 0.00</td>
</tr>
<tr>
<td>CT REQS/NOT IN EDM</td>
<td>N/P</td>
</tr>
</tbody>
</table>

Chapter 6  Report field definitions  253
Table 87 on page 254 describes the fields in the EDM pool section.

### Table 87: EDM pool field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAGES IN RDS POOL (BELOW)</strong></td>
<td>Number of pages used below the bar for the RDS pool</td>
</tr>
<tr>
<td><strong>HELD BY CT</strong></td>
<td>The number of pages below the bar used for cursor table sections (QISECT)</td>
</tr>
<tr>
<td><strong>Note:</strong> CT PAGES is number of pages both below and above the bar used for cursor table sections (the sum of QISECT and QISECTA)</td>
<td>This value is a snapshot of the number of pages allocated to cursor table sections (CTs). <strong>Tuning Tip:</strong> The ideal goal is to keep as many SKCTs, SKPTs, and DBDs in the EDM pool as possible to avoid I/O to the DB2 Directory.</td>
</tr>
<tr>
<td><strong>HELD BY PT</strong></td>
<td>Number of pages below the bar used for package tables (QISEKT)</td>
</tr>
<tr>
<td><strong>Free Pages</strong></td>
<td>Number of free pages (QISEFREE)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong> A rough rule of thumb is that in a production system in which the workload is predictable, at least 15% of the EDM pool pages should be free to account for an unanticipated load of a large DBD. This amount can vary, however, because many shops run more plans than could practically be kept in memory.</td>
<td></td>
</tr>
<tr>
<td><strong>PAGES IN RDS POOL (ABOVE)</strong></td>
<td>Number of pages used above the bar for the RDS pool</td>
</tr>
<tr>
<td><strong>HELD BY CT</strong></td>
<td>The number of pages above the bar used for cursor table sections (QISECT)</td>
</tr>
<tr>
<td><strong>Note:</strong> CT PAGES is number of pages both below and above the bar used for cursor table sections (the sum of QISECT and QISECTA)</td>
<td>This value is a snapshot of the number of pages allocated to cursor table sections (CTs). <strong>Tuning Tip:</strong> The ideal goal is to keep as many SKCTs, SKPTs, and DBDs in the EDM pool as possible to avoid I/O to the DB2 Directory.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| HELD BY PT                         | Number of pages above the bar used for package tables (QISEKT)  
This value is a snapshot of the number of pages allocated to working package tables (PTs). This number reflects the amount of storage consumed by working package tables.               |
| FREE PAGES                         | Number of free pages (QISEFREE)  
This counter is a snapshot of how many pages in the EDM pool are not being used by any CT or PT.  
**Tuning Tip**: A rough rule of thumb is that in a production system in which the workload is predictable, at least 15% of the EDM pool pages should be free to account for an unanticipated load of a large DBD. This amount can vary, however, because many shops run more plans than could practically be kept in memory. |
| PAGES IN DBD POOL (ABOVE)          | Number of pages used for the DBD pool (QISEDDBD)                                                                                                                                                             |
| HELD BY DBD                        | Number of pages used for DBDs (QISEDDBD)  
This counter is a snapshot of the number of pages currently occupied by database descriptors (DBDs).  
**Tuning Tip**: This count is the most important count of EDM pool objects because of an inherent rule that DBDs must occupy contiguous storage. SKPTs, SKCTs, CTs, or PTs do not have this restriction. This may result in EDM pool fragmentation. Ways of avoiding this problem include keeping DBD sizes to a reasonable size by not allowing more than 100 objects per DB2 database. If the number of DBD pages occupy more than half the EDM pool, consider increasing the size of the pool. |
| FREE PAGES                         | Number of free pages (QISEFREE)  
This counter is a snapshot of how many pages in the EDM pool are not being used by any DBD.  
**Tuning Tip**: A rough rule of thumb is that in a production system in which the workload is predictable, at least 15% of the EDM pool pages should be free to account for an unanticipated load of a large DBD. This amount can vary, however, because many shops run more plans than could practically be kept in memory. |
| PAGES IN STMT PL (ABOVE)           | Storage allocated above the bar for statement plan processing (QISESQCA)                                                                                                                                       |
| HELD BY STATEMENTS                 | Number of pages used for statement plans                                                                                                                                                                     |
| FREE PAGES                         | Number of free DBD pages (QISEDLRU)  
This counter is a snapshot of how many pages in the EDM pool are not being used by any statements.  
**Tuning Tip**: A rough rule of thumb is that in a production system in which the workload is predictable, at least 15% of the EDM pool pages should be free to account for an unanticipated load of a large DBD. This amount can vary, however, because many shops run more plans than could practically be kept in memory. |
<p>| PAGES IN SKEL PL (ABOVE)           | Storage allocated above the bar for skeleton tables                                                                                                                                                           |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HELD BY SKCT</td>
<td>Number of pages used for skeleton cursor tables (QISESKCT)&lt;br&gt;This value is a snapshot of the number of EDM pool pages allocated to skeleton cursor tables (SKCTs). Skeleton cursor tables are the DB2 plan information which is read from directory table SCT01.</td>
</tr>
<tr>
<td>HELD BY SKPT</td>
<td>Number of pages used for skeleton package tables (QISESKPT)&lt;br&gt;This value is a snapshot of the number of pages allocated to skeleton package tables (SKPTs). This value reflects the amount of storage used by skeleton package tables.</td>
</tr>
<tr>
<td>FREE PAGES</td>
<td>Number of free SKEL pages (QISEKLRU)&lt;br&gt;This counter is a snapshot of how many pages in the EDM pool are not being used by any SKCT or SKPT.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> A rough rule of thumb is that in a production system in which the workload is predictable, at least 15% of the EDM pool pages should be free to account for an unanticipated load of a large DBD. This amount can vary, however, because many shops run more plans than could practically be kept in memory.</td>
</tr>
<tr>
<td>CT REQUESTS</td>
<td>Number of requests for cursor table sections (QISECTG)&lt;br&gt;<strong>Tuning Tip:</strong> This number is incremented every time DB2 needs a new 4K cursor table section (CT) of the skeleton cursor table (SKCT). The request can be resolved by looking for a copy in the EDM pool; if a copy does not exist, a read operation must be made to the directory table SCT01. This number reflects how many sections were requested during a specific interval period.</td>
</tr>
<tr>
<td>FAILS DUE POOL FULL</td>
<td>Number of failures because EDM pool was full (QISEFAIL)&lt;br&gt;This counter is incremented when an operation cannot proceed because the EDM pool was full. This situation is extremely undesirable when all pages in the Environmental Descriptor Manager pool (EDM pool) are allocated and in use as database descriptors (DBDs), skeleton cursor tables (SKCTs, which are internal copies of plans), skeleton package tables (SKPTs, which are internal copies of packages), and working cursor tables (CTs), and working package tables (PTs). No other operation can be commenced until one or more pages are freed in this pool. &lt;br&gt;<strong>Tuning Tip:</strong> This number should be as close to zero as possible. If this situation occurs, consider increasing the number of pages in the EDM pool in DSNZPARM, on installation panel DSNTIPC.</td>
</tr>
<tr>
<td>PAGES USED IN STMT POOL</td>
<td>Number of pages used for the statement pool (QISEDYNP)</td>
</tr>
<tr>
<td>FAILS DUE POOL FULL</td>
<td>Number of EDM pool statement cache full failures (QISECFAL)</td>
</tr>
<tr>
<td>PAGES IN EDM STMT POOL</td>
<td>Number of pages in the statement pool (QISECPGE)</td>
</tr>
<tr>
<td>FREE PAGES IN EDM STMT PL</td>
<td>Number of free pages in the statement pool (QISECFRE)</td>
</tr>
<tr>
<td>PAGES FOR DYN SQL CACHE</td>
<td>Number of inserts into the dynamic statement cache (QISEDXI)</td>
</tr>
<tr>
<td>CT REQS/NOT IN EDM</td>
<td>Ratio of the number of requests for cursor table sections to the number of times CT sections not found in the EDM pool (QISECTG/QISECTL)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PAGES IN DBD FREE Chain</td>
<td>Number of pages used for the DBD pool</td>
</tr>
<tr>
<td>FAILS DUE TO DBD FULL</td>
<td>Number of DBD pool full failures (QISEDFAL)</td>
</tr>
<tr>
<td>%STMT POOL IN USE</td>
<td>Percentage of pages in the statement pool that are in use</td>
</tr>
<tr>
<td>REQ FOR PT SECTS</td>
<td>Number of requests for package table sections (QISEKTKG). This counter is incremented every time a package section (PT) is requested. <strong>Tuning Tip:</strong> Ideally, an SKPT (skeleton package table) with this PT will already be in the EDM pool. If not, the SKPT must be read from directory table SPT01.</td>
</tr>
<tr>
<td>LOAD PT SECT/DASD</td>
<td>Number of times package table sections not found in EDM pool (QISEKTL). This counter is incremented every time a request for a skeleton package table section is made on behalf of a calling thread but the SKPT was not found in the EDM pool. <strong>Tuning Tip:</strong> Ideally, an SKPT (skeleton package table) will already be in the EDM pool. If not, it must be read from directory table SPT01.</td>
</tr>
<tr>
<td>PT REQS/NOT IN EDM</td>
<td>Ratio of the number of requests for package table sections to the number of times package table sections not found in EDM pool (QISEKTKG/QISEKTL)</td>
</tr>
<tr>
<td>REQUESTS FOR DBD</td>
<td>Number of requests for DBDs (QISEDBDG). This number reflects the total number of requests for database descriptors (DBDs). Requests for DBDs are honored by either finding a working copy previously loaded into the EDM pool or by reading directory table DBD01.</td>
</tr>
<tr>
<td>LOAD DBD FROM DASD</td>
<td>Number of times DBD not found in the EDM pool (QISEDBDL). This counter reflects the number of times the database descriptor for a table is not found in the EDM pool. It must be read from the catalog table DBD01 into contiguous storage in the EDM pool. <strong>Tuning Tip:</strong> If possible, the DBDs can be preloaded into the EDM pool by issuing the -DISPLAY DATABASE(*) command to seed the EDM pool right after DB2 start. This situation might not account for all fragmentation that can occur because of age, but it can establish a baseline of how large the pool should be sized.</td>
</tr>
<tr>
<td>DBD REQS/NOT IN EDM</td>
<td>Ratio of the number of requests for DBDs to the number of times DBD not found in the EDM pool (QISEDBDG/QISEDBDL)</td>
</tr>
<tr>
<td>STMNTS IN GLOBAL CACHE</td>
<td>Number of statements in the global cache (QISESTMT)</td>
</tr>
<tr>
<td>PAGES IN DBD</td>
<td>Number of pages used for the DBD pool (QISEDBD)</td>
</tr>
<tr>
<td>%DBD POOL IN USE</td>
<td>Percentage of pages in the DBD pool that are in use</td>
</tr>
</tbody>
</table>

**Global DDF activity**

This topic describes the Global DDF activity section of the DB2 statistics detail report (BSTATDR).
Figure 74: Global DDF activity

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBATS QUEUED—MAX ACTIVE</td>
<td>Number of times a DBAT thread was queued (QDSTQDBT)</td>
</tr>
<tr>
<td></td>
<td>This counter indicates that a requester thread was queued because the</td>
</tr>
<tr>
<td></td>
<td>serving system did not allow enough active remote threads. The tuning</td>
</tr>
<tr>
<td></td>
<td>parameter is MAXDBAT in DSNZPARM.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If this situation occurs often, increase MAXDBAT in</td>
</tr>
<tr>
<td></td>
<td>DSNZPARM on installation panel DSNTIPE, reassemble, and restart DB2.</td>
</tr>
<tr>
<td>CONV DEALLOC—MAX THREADS</td>
<td>Number of conversations deallocated due to ZPARM limit (QDSTQCRU)</td>
</tr>
<tr>
<td></td>
<td>This situation occurs when the thread count from remote locations exceeds</td>
</tr>
<tr>
<td></td>
<td>the sum of maximum active threads and inactive threads in DSNZPARM.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If this situation occurs often, update the MAX REMOTE</td>
</tr>
<tr>
<td></td>
<td>CONNECTED (CONDBAT) field in DSNZPARM on installation panel DSNTIPE,</td>
</tr>
<tr>
<td></td>
<td>reassemble, and restart DB2.</td>
</tr>
<tr>
<td>INACTIVE DBATS—CURRENT</td>
<td>Current number of inactive DBATs (QDSTQCIT)</td>
</tr>
<tr>
<td></td>
<td>This counter reflects a snapshot count of inactive requester threads to</td>
</tr>
<tr>
<td></td>
<td>this server. An inactive thread is a thread that is currently not</td>
</tr>
<tr>
<td></td>
<td>executing but the VTAM connection has been kept intact on the assumption</td>
</tr>
<tr>
<td></td>
<td>that this user will still be doing further work.</td>
</tr>
</tbody>
</table>

Table 88 on page 258 describes the fields in the Global DDF activity section.

Table 88: Global DDF activity field definitions
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INACTIVE DBATS—HWM</td>
<td>Maximum number of inactive DBATs (QDSTQMIT) This counter reflects the high-water mark of inactive threads.</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>If the number is close to the value in DSNZPARM, consider increasing the number of inactive threads allowed (CONDBAT).</td>
</tr>
<tr>
<td>COLD START CONNECTIONS</td>
<td>Number of cold start connections with all remote locations (QDSTCSTR) This reflects DB2 attempting to synchronize with a requester that has been cold-started (two-phase commit operations only).</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>The primary significance of this number is that if it is nonzero, check whether any indoubt threads were left unresolved by the cold start. If so, the system programmer must issue -RESOLVE INDOUBT (COMMIT or ABORT) commands.</td>
</tr>
<tr>
<td>WARM START CONNECTIONS</td>
<td>Number of warm start connections with all remote locations (QDSTWSTR) This counter indicates all connections made through normal restart processing (two-phase commit operations only).</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>This number is of interest in determining that a problem does not exist.</td>
</tr>
<tr>
<td>RESYNCHRONIZATION ATTEMPT</td>
<td>Number of resynchronization attempts with all remote locations (QDSTRSAT) This counter is incremented when communication is lost between a requester and server (two-phase commit operations only). Following restoration of communications, DB2 attempts to resynchronize all servers and requesters.</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>A large number of resynchronization attempts indicates network difficulties or MVS problems.</td>
</tr>
<tr>
<td>RESYNCHRONIZATION SUCCEED</td>
<td>Number of successful resynchronization attempts (QDSTRSSU) This counter is incremented when DB2 has successfully completed the resolution of indoubt processing after a communications failure.</td>
</tr>
<tr>
<td>Tuning Tip:</td>
<td>High numbers in this counter indicate VTAM problems that should be resolved with the VTAM system programmer.</td>
</tr>
<tr>
<td>CURRENT ACTIVE DBATS</td>
<td>Current number of active database access threads (QDSTCNAT)</td>
</tr>
<tr>
<td>MAX ACTIVE DBATS—HWM</td>
<td>Maximum number of active DBATs that existed (QDSTHWAT)</td>
</tr>
<tr>
<td>MAX ALL DBATS—HWM</td>
<td>Maximum number of active and inactive database access threads (QDSTHWDT)</td>
</tr>
<tr>
<td>TYPE 1 CONN TERMINATE</td>
<td>Number of connections that were terminated instead of being made type 1 inactive because the maximum number of type 1 inactive DBATs was reached (QDSTNITC)</td>
</tr>
<tr>
<td>CUR TYPE 2 INACTIVE DBATS</td>
<td>Current number of inactive type 2 DBATs (QDSTCIN2)</td>
</tr>
<tr>
<td>TYPE 2 INACTIVE DBATS HWM</td>
<td>Maximum number of inactive type 2 DBATs - high-water mark (QDSTMIN2)</td>
</tr>
<tr>
<td>CUR QUEUED TYPE 2 INACT THD</td>
<td>Maximum number of type 2 inactive threads that were queued waiting for a database access thread (QDSTMQR2)</td>
</tr>
<tr>
<td>REC QUEUED TYPE2 INACT THD</td>
<td>Number of receive requests on inactive connections, or new connections that have been queued to be serviced by a disconnected (pooled) DBAT</td>
</tr>
</tbody>
</table>
Field | Description
--- | ---
QUEUED TYPE 2 INAC THD HWM | Number of queued RECEIVE requests for a type 2 inactive thread and the number of requests for new connections received after the maximum number of remote DBATs was reached (QDSTQIN2)
CURRENT DBATS NOT IN USE | Current number of active database access thread slots that are not in use (QDSTNADS)
DBATS NOT IN USE HWM | Maximum number of database access thread slots that were not in use because no processing was required to complete a queued receive request or to establish a new connection (QDSTMADS)
DBATS CREATED | Number of requests that required a DBAT to be created to process the request (QDSTNDBA)
POOL DBATS REUSED | Number of requests that were satisfied by assigning a pool thread to process the request (QDSTPOOL)
NBR REQ DBA ACCESS | Number of requests that required a DBAT to be created to process the requests
NBR REQ POOL ACCESS | Number of requests that were satisfied by assigning a disconnected (pooled) DBAT to process the requests
NBR OF Q'D CLIENT(TCP/CLS) | Number of queued client connections
NBR OF DBAT ACT PKG-BND | Number of active DBAT package binds
MAX OF DBAT ACT PKG-BND | Maximum number of DBAT package binds

**Group buffer pool activity**

This topic describes the Group buffer pool activity section of the DB2 statistics trace—long report (BSTATLT).

**Figure 75: Group buffer pool activity**

<table>
<thead>
<tr>
<th>GROUP BUFFER POOL GBP TOT</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
<th>GBP TOT</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sync Reads(x) Data Ret</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>GBP Dependent GetPages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Sync Reads(x) No Data</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Register Page List Request</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Sync Reads(NF) Data Ret</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Changed PGs Read after RPL</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Sync Reads(NF) No Data</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Pages Castout</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Num Unregistr Page Reqs</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Pages Castout Threshold</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Changed PGs Sync Write</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Castout Class Threshold</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Clean Pages Sync Write</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Group BP Castout Threshold</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Changed PGs Async Write</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Write Failed - No Storage</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Clean Pages Async Write</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>Number Unlock Castout</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Other Requests</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>#IXLCACHE Read Castout</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Space Map Pages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>#IXLCACHE Read Dir Info</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Index Leaf Pages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR Register Page Reqs</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Page P-Lock Lock Req</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR IXLCACHE Delete Name</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Tot Page P-Lock Lock Susp</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR ASYNC IXLCACHE PRIM</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Page P-Lock Unlock Req</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR Expl Cross Validate</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Tot Page P-Lock Lock Neg</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR GKP CHKPT Triggered</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Space Map Pages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR Failed WRT CHD Pages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Data Pages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR Del NM LST Reg 2ND GBP</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Index Leaf Pages</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR Del NM Regs To 2ND GBP</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Other Requests</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR Read Castout To 2ND GBP</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NBR ASYNC IXLCACHE 2ND GBP</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>NBR ASYNC IXLCACHE 2ND GBP</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

260 MainView for DB2 Performance Reporter User Guide
Table 89 on page 261 describes the fields in the Group buffer pool activity section.

**Table 89: Field definitions for group buffer pool activity**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| SYNC READS (XI) - DATA RET | Number of data sharing coupling facility synchronous reads that were issued because:  
  - A local virtual buffer pool or hiperpool had a page marked as invalid  
  - The page existed in the group buffer pool and was returned (QBGLXD)  
  This situation occurs normally in a data sharing complex in which data must be shared. The correct data is refreshed from the group buffer pool. |
| SYNC READS (XI) - NO DATA | Number of data sharing coupling facility synchronous reads that were issued because a local virtual buffer pool or hiperpool had a page marked as invalid but no data was returned (QBGLXR) |
| SYNC READS (NF) - DATA RET | Number of data sharing coupling facility synchronous reads that were issued because:  
  - A page was not found in the local virtual buffer pool or hiperpool  
  - The page existed in the group buffer pool and was returned (QBGLMD)  
  This situation occurs normally in a data sharing complex in which data must be shared. The correct data is refreshed from the group buffer pool. |
| SYNC READS (NF) - NO DATA | Number of data sharing coupling facility synchronous reads that were issued because a page could not be found in a local virtual buffer pool or hiperpool and no data was returned (QBGLMR + QBGLMN) |
| NUM UNREGTR PAGE REQTS | Number of coupling facility requests to unregister interest to the GBP for a single page (QBGLDG)  
  Normally, this process occurs as DB2 steals pages from the local buffer pool that belong to GBP-dependent page sets or partitions. |
| CLEAN PAGES SYNC WRITE | Number of clean pages written to the group buffer pool (QBGLWC). This process occurs only when GBPCACHE is set to ALL.  
  **Tuning Tip**: Although this process can be expensive, it posts the group buffer pool with clean pages. Also, it might be useful for small tables with high inter-system read interest to reduce contention. |
| CHANGED PGS SYNC WRITE | Number of changed pages written to the group buffer pool (QBGLSW)  
  Updated pages must be written to the coupling facility when the object is of inter-system interest so other DB2 instances can refresh their invalidated buffers. Only changed pages are written when GBPCACHE is set to the default of CHANGE. |
| CLEAN PAGES ASYNC WRITE | Total number of clean pages written asynchronously to the group buffer pool during this statistics interval (QBGLAC)  
  DB2 writes clean pages for page sets and partitions defined with GBPCACHE=ALL. |
<p>| CHANGED PGS ASYNC WRITE | Total number of changed pages written asynchronously to the group buffer pool during this statistics interval (QBGLAW) |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOT PAGE P-LOCK LOCK REQ</td>
<td>The number of page P-lock lock requests for each of the following categories, plus the total number for all of them (QBGLP1+QBGLP2+QBGLP3):</td>
</tr>
<tr>
<td></td>
<td>- Space map</td>
</tr>
<tr>
<td></td>
<td>- Data</td>
</tr>
<tr>
<td></td>
<td>- Index leaf pages</td>
</tr>
<tr>
<td>PAGE P-LOCK UNLOCK REQ</td>
<td>Number of page P-Lock unlock requests (QBGLU1)</td>
</tr>
<tr>
<td>TOT PAGE P-LOCK LOCK SUSP</td>
<td>The number of page P-lock lock suspensions for each of the following categories, plus the total number for all of them (QBGLS1+QBGLS2+QBGLS3):</td>
</tr>
<tr>
<td></td>
<td>- Space map</td>
</tr>
<tr>
<td></td>
<td>- Data</td>
</tr>
<tr>
<td></td>
<td>- Index leaf pages</td>
</tr>
<tr>
<td>TOT PAGE P-LOCK LOCK NEG</td>
<td>The number of page P-Lock lock negotiations for each of the following categories, plus the total number for all of them (QBGLIN1+QBGLN2 +QBGLN3):</td>
</tr>
<tr>
<td></td>
<td>- Space map</td>
</tr>
<tr>
<td></td>
<td>- Data</td>
</tr>
<tr>
<td></td>
<td>- Index leaf pages</td>
</tr>
<tr>
<td>GBP-DEPENDENT GETPAGES</td>
<td>Number of getpages for global buffer pool dependent pages (QBGLGG)</td>
</tr>
<tr>
<td>REGISTER PAGE LIST REQUEST</td>
<td>Number of requests to register a page list in the coupling facility (QBGLAX)</td>
</tr>
<tr>
<td></td>
<td>DB2 prefetch can register page lists only if the member is running on IBM MVS 5.2 or later and the group buffer pool is allocated in a coupling</td>
</tr>
<tr>
<td></td>
<td>facility with CFLEVEL=2 or above.</td>
</tr>
<tr>
<td>CHANGED PGS READ AFTER RPL</td>
<td>Number of coupling facility reads that retrieve a changed page from the group buffer pool as a result of feedback from the request to register</td>
</tr>
<tr>
<td></td>
<td>a page list (QBGLAY)</td>
</tr>
<tr>
<td></td>
<td>DB2 prefetch can retrieve changed pages only if the member is running on MVS 5.2 or later and the group buffer pool is allocated in a coupling</td>
</tr>
<tr>
<td></td>
<td>facility with CFLEVEL=2 or above.</td>
</tr>
<tr>
<td>PAGES CASTOUT</td>
<td>Number of pages cast out from the GBP (QBGLRC)</td>
</tr>
<tr>
<td></td>
<td>A data sharing complex periodically externalizes updated pages to DASD in a process known as castout. The castout data is externalized for</td>
</tr>
<tr>
<td></td>
<td>various reasons, such as:</td>
</tr>
<tr>
<td></td>
<td>- A GBP castout threshold is reached (similar to a virtual buffer pool reaching its deferred write threshold)</td>
</tr>
<tr>
<td></td>
<td>- A class castout threshold is reached (similar to a data set reaching its vertical deferred write threshold)</td>
</tr>
<tr>
<td></td>
<td>- A GBP checkpoint is triggered</td>
</tr>
<tr>
<td></td>
<td>At this point, there is no more interest in the page set between DB2 instances.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>CASTOUT CLASS THRESHOLD</td>
<td>Number of times GBP castout was initiated because the class castout threshold was reached (QBGLCT) Data sharing GBP castout processing is initiated because the number of changed pages for a castout class queue exceeded the class threshold. This process causes updated pages to be read by the owning DB2 from the GBP and written to DASD. <strong>Tuning Tip:</strong> This process is similar to vertical deferred write processing on a local DB2 and is a normal way to externalize updated pages. The default class castout threshold is a single class (one or more page sets/partitions) occupying 10 percent or more of the group buffer pool. This threshold is tunable.</td>
</tr>
<tr>
<td>GROUP BP CASTOUT THRESHOLD</td>
<td>Number of times GBP castout was initiated because the GBP castout threshold was reached (QBGLGT) Data sharing GBP castout processing is initiated because the number of changed pages in the GBP exceeded the GBP castout threshold. This process causes updated pages to be read by the owning DB2 from the GBP and written to DASD. <strong>Tuning Tip:</strong> This process is similar to deferred write processing on a local DB2 and is a normal way to externalize updated pages. The default GBP castout threshold is 50 percent. This threshold is tunable.</td>
</tr>
<tr>
<td>WRITE FAILED- NO STORAGE</td>
<td>Number of failed coupling facility writes due to lack of storage (QBGLWF) This counter is incremented when there is not enough storage allocated to the coupling facility to complete all write requests. <strong>Tuning Tip:</strong> The group buffer pools are overcommitted. Reduce the size of the group buffer pools unless more coupling facility memory can be acquired to support them.</td>
</tr>
<tr>
<td>NUMER UNLOCK CASTOUT</td>
<td>Number of coupling facility requests to unlock the castout lock for castout I/Os that have completed (QBGLUN) As pages are in the process of being cast out to DASD, they are locked for castout in the coupling facility. The castout lock is not an IRLM lock; its purpose is to enforce that only one system is doing castout for a given page at a time. <strong>Tuning Tip:</strong> DB2 usually includes multiple pages in a write I/O request for castout. Therefore, this value should always be less than or equal to the number of pages cast out. The value will be significantly less if multiple pages are written per I/O, so this ratio gives a good indication of how castout is performing.</td>
</tr>
<tr>
<td>#IXLCACHE READ CASTOUT</td>
<td>Number of requests made to the group buffer pool to determine which pages, from a particular page set or partition, must be cast out because they are cached as changed pages (QBGLCC)</td>
</tr>
<tr>
<td>#IXLCACHE READ DIR INFO</td>
<td>Number of coupling facility requests to read directory information (QBGLRD) The group buffer pool structure owner issues this request for GBP checkpoints to read the directory entries of all changed pages in the group buffer pool. This process enables recording the oldest LRSN and having it available for recovery purposes in case the group buffer pool fails. (This recovery LRSN is displayed in message DSNB798I.) <strong>Tuning Tip:</strong> To read the directory entries for all changed pages, this request might need to be issued multiple times for each GBP checkpoint. An abnormally high number of requests might indicate that the requests are timing out due to the coupling facility's model-dependent timeout criteria; in that case, consider upgrading your coupling facilities to CFLEVEL 2 or above.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>NBR REGISTER PAGE REQTS</strong></td>
<td>Number of coupling facility requests to register interest to the GBP for a single page (QBGLRG) These are register-only requests. DB2 is not requesting returned data for the page because the page is not cached in the group buffer pool. The request's purpose is to create a directory entry for the page for cross-invalidation when downgrading the P-lock on a page set or partition from S mode to IS mode, or from SIX mode to IX mode.</td>
</tr>
<tr>
<td><strong>NBR IXLCACHE DELETE NAME</strong></td>
<td>Number of group buffer pool requests to delete all directory and data entries for a page set or partition (QBGLDN) DB2 issues this request when it converts a page set or partition from GBP-dependent to non-GBP-dependent. For objects defined with GBPCACHE ALL, DB2 issues this request when the first DB2 member opens the object.</td>
</tr>
<tr>
<td><strong>NBR ASYNC IXLCACHE PRIM</strong></td>
<td>Number of asynchronous IXLCACHE invocations for the primary group buffer pool (QBGLHS)</td>
</tr>
<tr>
<td><strong>NBR EXPL CROSS VALIDATE</strong></td>
<td>Number of explicit cross-invalidations (QBGLEX)</td>
</tr>
<tr>
<td><strong>NBR GBP CHKPT TRIGGERED</strong></td>
<td>Number of group buffer pool checkpoints triggered by this member (QBGLCK)</td>
</tr>
<tr>
<td><strong>NBR FAILED WRT CHD PAGES</strong></td>
<td>Number of coupling facility requests to write changed pages to the secondary group buffer pool for duplexing that failed due to a lack of storage in the coupling facility (QBGL2F)</td>
</tr>
<tr>
<td><strong>NBR DEL NM LST REQS 2ND GBP</strong></td>
<td>Number of group buffer pool requests to the secondary group buffer pool to delete a list of pages after they have been cast out from the primary group buffer pool (QBGL2D)</td>
</tr>
<tr>
<td><strong>NBR DEL NM REQS TO 2ND GBP</strong></td>
<td>Number of group buffer pool requests to delete a page from the secondary group buffer pool (QBGL2N) The group buffer pool structure owner issues these requests to delete orphaned data entries in the secondary as part of the garbage collection logic.</td>
</tr>
<tr>
<td><strong>NBR READ CASTOUT TO 2ND GBP</strong></td>
<td>Number of coupling facility requests to read the castout statistics for the secondary group buffer pool (QBGL2R) The group buffer pool structure owner issues these requests to check for orphaned data entries in the secondary.</td>
</tr>
<tr>
<td><strong>NBR ASYNC IXLCACHE 2ND GBP</strong></td>
<td>Number of asynchronous IXLCACHE invocations for the secondary group buffer pool (QBGL2H)</td>
</tr>
<tr>
<td><strong>OTHER REQUESTS</strong></td>
<td>Number of other coupling facility interactions experienced during castout processing (QBGLOS)</td>
</tr>
</tbody>
</table>

**IFC destinations**

This topic describes the IFC destinations section of the DB2 statistics detail report (BSTATDR).
Figure 76: IFC destinations

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMF</td>
<td>Total number of SMF records successfully written, not written, buffer overruns, not accepted, and write failures</td>
</tr>
<tr>
<td>GTF</td>
<td>Total number of GTF records successfully written, not written, not accepted, and write failures</td>
</tr>
<tr>
<td>OP1</td>
<td>Total number of OP1 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP2</td>
<td>Total number of OP2 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP3</td>
<td>Total number of OP3 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP4</td>
<td>Total number of OP4 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP5</td>
<td>Total number of OP5 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP6</td>
<td>Total number of OP6 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP7</td>
<td>Total number of OP7 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP8</td>
<td>Total number of OP8 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>RES</td>
<td>Total number of RES records successfully written</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of records successfully written, not written, not accepted, and write failures</td>
</tr>
</tbody>
</table>

Table 90 on page 265 describes the fields in the IFC destinations section.

Table 90: IFC destinations

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMF</td>
<td>Total number of SMF records successfully written, not written, buffer overruns, not accepted, and write failures</td>
</tr>
<tr>
<td>GTF</td>
<td>Total number of GTF records successfully written, not written, not accepted, and write failures</td>
</tr>
<tr>
<td>OP1</td>
<td>Total number of OP1 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP2</td>
<td>Total number of OP2 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP3</td>
<td>Total number of OP3 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP4</td>
<td>Total number of OP4 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP5</td>
<td>Total number of OP5 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP6</td>
<td>Total number of OP6 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP7</td>
<td>Total number of OP7 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>OP8</td>
<td>Total number of OP8 records successfully written, not written, and not accepted</td>
</tr>
<tr>
<td>RES</td>
<td>Total number of RES records successfully written</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of records successfully written, not written, not accepted, and write failures</td>
</tr>
</tbody>
</table>

IFC record count

This topic describes the IFC record count section of the DB2 statistics detail report (BSTATDR).
Table 91 on page 266 describes the fields in the IFC record count section.

### Table 91: IFC record count field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LATCH CNT</strong></td>
<td>Number of level 01 through 32 latch contentions (QVLSLC01 through QVLSLC32)</td>
</tr>
<tr>
<td><strong>Tuning Tip</strong></td>
<td>You can usually ignore these counters unless they exceed 1000 contentions</td>
</tr>
<tr>
<td></td>
<td>per second. For latch counters 14, 19 and 24, try the performance tuning</td>
</tr>
<tr>
<td></td>
<td>actions listed below to reduce contentions. The other latch counters can</td>
</tr>
<tr>
<td></td>
<td>not be tuned externally.</td>
</tr>
<tr>
<td></td>
<td>However, occasionally DB2 performance APARs reference high rates of</td>
</tr>
<tr>
<td></td>
<td>contention for other latches.</td>
</tr>
<tr>
<td>■ LC14: Buffer pool</td>
<td>Least Recently Used (LRU) chain latch contention. If this contention rate is</td>
</tr>
<tr>
<td></td>
<td>too high, move the highly accessed small objects to a different buffer</td>
</tr>
<tr>
<td></td>
<td>pool. If you can take advantage of data space buffer pools (using an IBM</td>
</tr>
<tr>
<td></td>
<td>zSeries processor and OS/390 2.10 or above), use data space buffers. If</td>
</tr>
<tr>
<td></td>
<td>the buffer pool hit ratio is 100% or 0%, use FIFO (First In First Out) for</td>
</tr>
<tr>
<td></td>
<td>the Page Steal Algorithm Parameter (PGSTEAL) instead of the default LRU</td>
</tr>
<tr>
<td></td>
<td>algorithm in the ALTER BUFFER POOL command.</td>
</tr>
<tr>
<td>■ LC19: Log manager</td>
<td>latch contention. If this contention rate is too high, increase the Log</td>
</tr>
<tr>
<td></td>
<td>OUTBUFF Zparm parameter. If this contention rate is too high in a non-data-</td>
</tr>
<tr>
<td></td>
<td>sharing environment, consider data sharing configuration.</td>
</tr>
<tr>
<td>■ LC24: Environmental</td>
<td>Descriptor Manager (EDM) pool LRU chain latch contention. Use the bind</td>
</tr>
<tr>
<td></td>
<td>options ACQUIRE (use) and RELEASE (dealloc) on the most frequently used</td>
</tr>
<tr>
<td></td>
<td>plans and packages to reduce the contention. If this change affects too</td>
</tr>
<tr>
<td></td>
<td>many plans and packages, you may need to increase the size of the EDM pool.</td>
</tr>
</tbody>
</table>

### Locking activity

This topic describes the Locking activity section of the DB2 statistics detail report (BSTATDR).
Figure 78: Locking activity

<table>
<thead>
<tr>
<th>LOCKING ACTIVITY</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSPENSIONS (ALL)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SUSPENSIONS (LOCK ONLY)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SUSPENSIONS (LATCH ONLY)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SUSPENSIONS (OTHER)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TIMEOUTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DEADLOCKS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>LOCK REQUESTS</td>
<td>24</td>
<td>0.80</td>
<td>24.00</td>
<td>24.00</td>
</tr>
<tr>
<td>UNLOCK REQUESTS</td>
<td>34</td>
<td>1.13</td>
<td>34.00</td>
<td>34.00</td>
</tr>
<tr>
<td>QUERY REQUESTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CHANGE REQUESTS</td>
<td>5</td>
<td>0.17</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>OTHER REQUESTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>LOCK ESCALATION (SHARED)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>LOCK ESCALATION (EXCL)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DRAIN REQUESTS</td>
<td>5</td>
<td>0.17</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>DRAIN REQUESTS FAILED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CLAIM REQUESTS</td>
<td>10</td>
<td>0.33</td>
<td>10.00</td>
<td>10.00</td>
</tr>
<tr>
<td>CLAIM REQUESTS FAILED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 92 on page 267 describes the fields in the Locking activity section.

Table 92: Locking activity field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSPENSIONS (ALL)</td>
<td>Total number of suspensions</td>
</tr>
<tr>
<td>SUSPENSIONS (LOCK ONLY)</td>
<td>number of suspends due to lock conflict (QTXASLOC)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report--averages and the DB2 Statistics Lock Report, this value is the average number of suspensions due to</td>
</tr>
<tr>
<td></td>
<td>waiting for lock per CREATE THREAD during this statistics interval. This counter is incremented any time a thread has a conflicting lock</td>
</tr>
<tr>
<td></td>
<td>request, such as an updater requesting exclusive access to a page being used by another thread.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> In a multitasking system, suspensions occur in the normal course of the events. If applications are well-tuned, taking</td>
</tr>
<tr>
<td></td>
<td>frequent commits and holding on to resources for the fewest possible instructions, suspensions can be minimized. If suspensions cause</td>
</tr>
<tr>
<td></td>
<td>frequent timeouts, consider row-level locking.</td>
</tr>
<tr>
<td>SUSPENSIONS (LATCH ONLY)</td>
<td>Number of suspends due to latch conflicts (QTXASLAT)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Lock Report, this value is the average number of times suspended due to latching per CREATE THREAD during this</td>
</tr>
<tr>
<td></td>
<td>statistics interval. This number is incremented when a latch conflict exists between two DB2 threads or internal serialization processing.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Latches are generally of extremely short duration. Unless the time is a significant component of overall wait time, it</td>
</tr>
<tr>
<td></td>
<td>is not a factor which should cause tuning problems.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| SUSPENSIONS (OTHER)           | Number of suspends due to other conflicts (QTXASOTH)  
In the DB2 Statistics Lock Report, this value is the average number of times suspended due to other reasons per CREATE THREAD during this statistics interval. This number is incremented when DB2 internal processes collide.  
**Tuning Tip:** This number is not generally of significance in tuning. Unusually high numbers should be reported to IBM service. |
| TIMEOUTS                      | Number of lock timeouts (QTXATIM)  
This count is incremented every time a DB2 thread waits longer to get a page than the timeout interval, which is specified with DSNZPARM IRLMRWT on installation panel DSNTIP1. By default, it is 60 seconds. Utilities can be allowed to wait several multiples of IRLMRWT.  
**Tuning Tip:** Lock timeouts are usually caused by an application failing to commit in time for the other thread to gain access to data on pages. Often the problem can be resolved by reducing the time between commits and putting updateable statements near to their commit logic. Every time a timeout occurs, DB2 writes the holder and suspender to the MSTR job log. Normally, this number should be as close to zero as possible. |
| DEADLOCKS                     | Number of deadlocks (QTXADEA)  
This count is incremented every time DB2 encounters a deadlock situation for which the IRLM must cancel a task involved in a deadly embrace.  
**Tuning Tip:** Deadlocks are caused by threads requesting access to two resources which can never be resolved. DB2 chooses its victim by selecting the thread that has done the least number of updates. It records the deadlock in the MSTR address space job log. In well-tuned systems, this number should be low. |
| LOCK REQUESTS                 | Number of lock requests (QTXALOCK)  
In the DB2 Statistics Lock Report, this value is the average number of lock requests per CREATE THREAD during this statistics interval. This counter is incremented for each call to the IRLM lock manager to acquire a lock on a page or row or to acquire a claim or drain on a data set.  
**Tuning Tip:** Each lock request is processed by the IRLM. Lock avoidance techniques should show reductions in overall counts and overhead, since latches execute totally within DB2. |
| UNLOCK REQUESTS               | Number of unlock requests (QTXAUNLK)  
This count is incremented when the application has finished processing a page or row, or a claim or drain can be released. This amount is significant as to cross memory processing and reflects the normal release of resources. |
| QUERY REQUESTS                | Number of query requests (QTXAQRY)  
This counter is incremented every time the IRLM gets a request to read data.  
**Tuning Tip:** This information is useful in determining the read activity on a system but does not include lock avoidance techniques. |
| CHANGE REQUESTS               | Number of change requests (QTXACHG)  
This counter is incremented every time the IRLM is asked to change a lock from one type to another (for example, from S to X).  
**Tuning Tip:** The information is useful in determining the overall volatility of the system. |
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHER REQUESTS</td>
<td>Number of other IRLM requests (QTXAIRLM)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the IRLM receives a lock request not included in the other counts.</td>
</tr>
<tr>
<td>LOCK ESCALATION (SHARED)</td>
<td>Number of lock escalations to shared mode (QTXALES)</td>
</tr>
<tr>
<td></td>
<td>This count is incremented every time the number of locks against a single table space exceeds the number set in DSNZPARM NUMLKTS on installation panel DSNTIPJ or in the LOCKMAX clause of the CREATE table space statement.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation is not normal unless you are using repeatable read (RR). If it occurs often, consider changing the LOCKSIZE or LOCKMAX to a higher value or consider binding the plan with cursor stability (CS) or uncommitted read (UR).</td>
</tr>
<tr>
<td>LOCK ESCALATION (EXCL)</td>
<td>Number of lock escalations to exclusive mode (QTXALEX)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time the number of updateable locks against a single table space exceeds the DSNZPARM NUMLKTS on installation panel DSNTIPJ or in the LOCKMAX clause of the CREATE table space statement. It occurs when the LOCKSIZE parameter is specified as ANY and DB2 has escalated the lock owner to an exclusive lock of the entire table.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation is extremely undesirable. It is usually caused by leaving the LOCKSIZE(ANY) default. To resolve this situation, consider changing the parameter to LOCKSIZE(PAGE) or in special situations, LOCKSIZE(ROW), which causes the offending application to take the -904 unavailable resource error rather than cause general unavailability to the rest of the users. This situation is almost always caused by application failure to commit in a timely fashion and can be resolved by application code changes as well as by DBA action.</td>
</tr>
<tr>
<td>DRAIN REQUESTS</td>
<td>Number of drain requests (QTXADRNO)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented each time a utility or command requests a serialization against a page set resource.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number is of significance in determining the amount of utility and command activity that requests some serial access to a resource.</td>
</tr>
<tr>
<td>DRAIN REQUESTS FAILED</td>
<td>Number of unsuccessful drain requests (QTXADRUN)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a potential drainer (utility or command) cannot obtain use of a page set because the claim count has not dropped to zero within the utility timeout value set in IRLMWRT of DSNZPARM.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number is of significance in determining the number of unsuccessful utility and command processes due to user activity in the resource.</td>
</tr>
<tr>
<td>CLAIM REQUESTS</td>
<td>Number of claim requests (QTXACLNO)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time a user executes an SQL statement that increments the use count of a table space, partition, or q space data set. This number gives an overall level of SQL activity in this system.</td>
</tr>
<tr>
<td>CLAIM REQUESTS FAILED</td>
<td>Number of unsuccessful claim requests (QTXACLUN)</td>
</tr>
<tr>
<td></td>
<td>This number is incremented every time a user issues a request for a claim to an SQL resource but cannot acquire it, usually because a utility or command DRAIN is on the object being sought.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number is of some significance in determining contention between SQL and other types of utilities or commands.</td>
</tr>
</tbody>
</table>
Log activity

This topic describes the Log activity section of the DB2 statistics detail report (BSTATDR).

Figure 79: Log activity

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ Satisfy'd-Output Buff</td>
<td>Number of log reads from buffer (QJSTRBUF)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when DB2 successfully finds the necessary data in a log buffer to perform a backout or recover operation.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This situation is the best situation if an application abends. The pages necessary to be undone are still in memory (the DB2 output log buffer) and backout should take place quickly.</td>
</tr>
<tr>
<td>READ Satisfy'd-Outp Buf(%)</td>
<td>Percentage of log reads that were satisfied in the log output buffer</td>
</tr>
</tbody>
</table>

Table 93 on page 270 describes the fields in the Log activity section.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ SATISFD-ACTIVE LOG</td>
<td>Number of log reads from active logs (QJSTRACT) This counter is incremented when DB2 successfully finds the necessary data in the active log to perform a backout or recover operation. (The pages are no longer in the log output buffer.) <strong>Tuning Tip:</strong> The IBM general guideline is that if storage is not a consideration, plan to have enough active logs on DASD to backout or recover for at least the prior 24 hours, without requiring access to the archive logs. If this is not possible, consider the longest unit of work to be run on the DB2 in question and have enough logs so in the event of an abend, calls to the archive log data set are avoided. It should be noted that backout takes approximately twice the time as the original update, because DB2 must write compensation records to the log while reading backwards from it.</td>
</tr>
<tr>
<td>READ SATISFD-ACTV LOG(%)</td>
<td>Percentage of log reads satisfied from the active log</td>
</tr>
<tr>
<td>READ SATISFD-ARCHV LOG</td>
<td>Number of log reads from archive logs (QJSTRARH) This counter is incremented when a backout or recover operation must go back to the archive logs to accomplish the task. <strong>Tuning Tip:</strong> This is generally not desirable because tape or cartridge mounts must be performed to recover or back out data from the archive logs. If this number is consistently greater than zero, it is a good idea to increase the number of active logs to avoid unnecessary delays.</td>
</tr>
<tr>
<td>READ SATISFD-ARCH LOG(%)</td>
<td>Percentage of log reads that were satisfied from the archive log data set</td>
</tr>
<tr>
<td>TAPE VOL CONTENTION WAIT</td>
<td>Number of log read accesses delayed due to tape contention (QJSTTVC) This counter is incremented when two or more backout or recover operations call for the same tape volume. DB2 holds and MVS enqueue until the volume is freed. <strong>Tuning Tip:</strong> Ideally, this number should be zero. Consider using DFHSM or similar media to stage the archive data to DASD if this situation is a frequent occurrence. DB2 allows multiple tasks to share archive data on DASD as well as look-ahead tape mounts.</td>
</tr>
<tr>
<td>WRITE - NOWAIT</td>
<td>Number of nowait log writes (QJSTWRNW) This counter is incremented when log records are written directly to the log buffers without waiting for the write to the data set. Unless an application program is seriously taking too many COMMITs, this process is the normal asynchronous log processing that does not cost the application any wait time.</td>
</tr>
<tr>
<td>WRITE OUTPUT LOG BUFFERS</td>
<td>Number of calls to the log write routine (QJSTBFWR) In the DB2 Statistics Overview Report--averages, this value is the average number of write requests to the active log per CREATE THREAD during this statistics interval. This counter is incremented every time log records need to be written. The number does not represent the number of physical I/Os because DB2 attempts to chain CIs together before writing to the log.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>BSDS ACCESS REQUESTS</td>
<td>Number of BSDS access requests (QJSTBSDS)</td>
</tr>
<tr>
<td></td>
<td>This counter increments every time the logging subsystem must access the bootstrap data set. DB2 maintains the RBA range for every active and archive log in the system.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number will usually be nonzero, because the BSDS must be updated by DB2 every time an archive log process occurs (a copy of the BSDS is REPROed to the first file on the archive medium) and updates are made to the high and low RBA range. Over time, however, look for steadily increasing numbers in this counter. The bootstrap data set is the only key-sequenced VSAM data set (KSDS) used by DB2. As with any other KSDS, CI and CA splits can and do occur. These should be dealt with by REPROing the KSDS to a different file or redefining the BSDS as a larger data set.</td>
</tr>
<tr>
<td>OUTPUT LOG BUFFER PAGED IN</td>
<td>Number of times that a log output buffer was paged in before it could be initialized (QJSTBPAG)</td>
</tr>
<tr>
<td></td>
<td>When a log output buffer is paged in before it is initialized, the log write latch is held.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> A nonzero value could indicate that the log output buffer size is too large or there is insufficient real storage to back the log output buffer size.</td>
</tr>
<tr>
<td>CONT INTERV CREATED-ACTV</td>
<td>Number of active log output CIs created (QJSTBFLL)</td>
</tr>
<tr>
<td></td>
<td>This counter simply updates the number of 4K CIs created as part of log processing.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The number is useful in determining the heaviest logging periods in the system.</td>
</tr>
<tr>
<td>ARCHIVE LOG READ ALLOCS</td>
<td>Number of archive log read allocations (QJSTALR)</td>
</tr>
<tr>
<td></td>
<td>This counts every allocation of an archive log for backout or recover operations.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> High numbers indicate that there are not enough active logs properly sized to prevent archive log allocation. In a high performance environment, consider having active logs to hold 24 hours worth of work and archive the logs to media which can be shared in the event of an application failure involving recovery of multiple table spaces. The ideal value is zero.</td>
</tr>
<tr>
<td>ARCHIVE LOG WRITE ALLOCS</td>
<td>Number of archive log write allocations (QJSTALW)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of every allocation of an archive log for write and is an indication of how many archive logs are written. Larger archive logs mean fewer allocations.</td>
</tr>
<tr>
<td>CONTR INTRV OFFLOAD-ARCH</td>
<td>count of control intervals offloaded (QJSTCIOF)</td>
</tr>
<tr>
<td></td>
<td>This number reflects the number of active log CIs archived to the archive log medium.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number will vary per time interval based upon the size of the active log data set. It is generally recommended that an active log be approximately the capacity of a cartridge data set (approximately 300 cylinders of 3390 DASD).</td>
</tr>
<tr>
<td>READ DELAYED-UNAVAIL RES</td>
<td>Number of read accesses delayed due to resource unavailability (QJSTWUR)</td>
</tr>
<tr>
<td></td>
<td>This counter reflects the number of time a recovery or backout was delayed due to tape contention or not enough TCBs to process the number requested.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The -SET ARCHIVE command can increase the number of tape drives available to DB2.</td>
</tr>
<tr>
<td>READ DELAY-ARCH ALLOC LIM</td>
<td>Archive allocate limit per minute/thread/commit</td>
</tr>
</tbody>
</table>

Statistics report fields
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| **LOOK-AHEAD MOUNT ATTEMPT** | Number of look-ahead tape mounts attempted (QJSTLAMA)  
DB2 attempts to pre-stage the second and third archive tape or cartridge volumes with archive data sets to reduce operator mount time. This counter reflects the number of times DB2 had to do this.  
**Tuning Tip:** This number should be equal to the number of successful look-ahead tape mounts. Enough tape/cartridge drives must be available to DB2 on the MVS image to make use of this feature. |
| **LOOK-AHEAD MOUNT SUCCESS** | Number of successful look-ahead tape mounts (QJSTLAMS)  
This counter is incremented when DB2 is able to pre-stage the second and third volumes of multiple tapes or cartridges in a backout or recovery operation.  
**Tuning Tip:** This number should be equal to the number of look ahead tape mounts attempted. If they are not equal, a shortage of tape drives allocated to DB2 probably exists. To determine the amount of drives available, issue the -DIS ARCHIVE command; if too few drives are allocated in the count field, consider issuing the -SET ARCHIVE command to allocate a higher number, assuming the tape or cartridge resources are available. |
| **LOG WRITE I/O REQUESTS** | Total number of log write I/O requests (Media Manager calls) (QJSTLOGW)  
This value includes waits for copy1 and copy2 active log data set writes. |
| **LOG CI WRITTEN** | Total number of log CIs written (QJSTCIWR)  
This value includes CI rewrites and copy1 and copy2 active log data set writes. If a given CI is rewritten five times, this counter is incremented by five.  
**Tuning Tip:** This counter, multiplied by 4KB and divided by the statistics interval in seconds, represents the number of bytes per second of log data written to the active log data sets. When this value exceeds 1MB/sec per log copy, attention should be paid to log data set I/O tuning. |
| **LOG RATE FOR 1 LOG (MB)** | Number of log serial write requests |
| **LOG WRITE SUSPENDED** | Number of times that a log manager request results in a suspend for a log record that is being written out to the log data sets (QJSTLSUS) |

### Miscellaneous

This topic describes the Miscellaneous section of the DB2 statistics detail report (BSTATDR).

**Figure 80: Miscellaneous**

```
MISCELLANEOUS
LOG RBA ADDRESS: 000000007A41019F
STATS INVOKE RSN: ACTIVATED BY TIMER
BYPASSED COLUMNS: 0
MAX SQL CASCAD LVL: N/P
MAX STOR LOB VALUES: N/P
```
Table 94 on page 274 describes the fields in the Miscellaneous section.

**Table 94: Miscellaneous field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG RBA ADDRESS</td>
<td>Highest used RBA address of the log (QWSDLR)</td>
</tr>
<tr>
<td>STATS INVOKE RSN</td>
<td>Reason statistics was invoked (QWSDRINV)</td>
</tr>
<tr>
<td></td>
<td>This value can be one of the following:</td>
</tr>
<tr>
<td></td>
<td>■ DB2 STARTUP</td>
</tr>
<tr>
<td></td>
<td>■ DB2 SHUTDOWN</td>
</tr>
<tr>
<td></td>
<td>■ ACTIVATED BY COMMAND</td>
</tr>
<tr>
<td></td>
<td>■ ACTIVATED BY TIMER</td>
</tr>
<tr>
<td></td>
<td>■ ACTIVATED AT CHECKPOINT</td>
</tr>
<tr>
<td></td>
<td>■ ACTIVATED DURING ACCOUNTING</td>
</tr>
<tr>
<td></td>
<td>■ ACTIVATED DURING READS</td>
</tr>
<tr>
<td>BYPASSED COLUMNS</td>
<td>Total number of columns (rows times columns) for which an invalid select procedure was encountered during this statistics interval (QISTCOLS)</td>
</tr>
<tr>
<td>MAX SQL CASCAD LVL</td>
<td>Maximum level of indirect SQL cascading (QXCASCDP)</td>
</tr>
<tr>
<td>MAX STOR LOB VALUES</td>
<td>Maximum storage used for LOB values (QXSTLOBV)</td>
</tr>
</tbody>
</table>

**Open/close activity**

This topic describes the Open/close activity section of the DB2 statistics detail report (BSTATDR).

**Figure 81: Open/close activity**

<table>
<thead>
<tr>
<th>OPEN/CLOSE ACTIVITY</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN DATASETS - HWM</td>
<td>15</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>OPEN DATASETS</td>
<td>15</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NOT IN USE/NOT CLOSE-HWM</td>
<td>15</td>
<td>0.50</td>
<td>15.00</td>
<td>15.00</td>
</tr>
<tr>
<td>DS NOT IN USE/NOT CLOSED</td>
<td>15</td>
<td>0.50</td>
<td>15.00</td>
<td>15.00</td>
</tr>
<tr>
<td>IN USE DATA SETS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DS CLOSED-THRESH REACHED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DS CONVERTED R/W TO R/O</td>
<td>5</td>
<td>0.17</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Table 95 on page 275 describes the fields in the Open/close activity section.
### Table 95: Open/close activity field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN DATASETS—HWM</td>
<td>Maximum number of open data sets (QTMAXDS) This number reflects the high-water mark of all open data sets. When DB2 reaches 99% of the DSMAX value, it starts physically closing page sets, first those with CLOSE(YES), then those with CLOSE(NO), using a least recently used (LRU) algorithm. This value can be greater than DSMAX.</td>
</tr>
</tbody>
</table>
| OPEN DATASETS                              | Number of data sets currently open (QTDSOPN) This snapshot count reflects all open table space and index space data sets at the time the statistics record was cut.  
**Tuning Tip:** DB2 DSNZPARM DSMAX specifies the total storage that can be allocated for open data sets. This number cannot exceed 10,000. |
| NOT IN USE/NOT CLOSE—HWM                   | Maximum number of page sets on deferred close queue (QTMAXPB) This represents the high-water mark of data sets that are not in use and not physically closed.  
**Tuning Tip:** DB2 goes through pseudo-close processing because the expense of VSAM OPEN and CLOSE is quite high. But when the DSMAX or 10,000 data set limit is reached, CLOSE(YES), then those with CLOSE(NO), using a least recently used (LRU) algorithm. This value can be greater than DSMAX. |
| DS NOT IN USE/NOT CLOSED                    | Current number of deferred close data sets (QTSLWDD) This value is a snapshot count of the number of data sets that are not in use but remain in deferred close status because DB2 has not reached a threshold which would involve physical close activity. DB2 attempts to avoid physical VSAM OPENS and CLOSES. It places the unused data sets on the deferred close queue to avoid the REOPEN cost when next used. The number of in-use data sets is the difference between the currently open and currently deferred closed data sets. |
| IN USE DATA SETS                           | Number of data sets currently in use                                                                                                                                                                         |
| DS CLOSED-THRESH REACHED                   | Number of unused data sets closed due to deferred close (QTDSDRN) This counter is incremented when a data set has not been recently used and DB2 has reached 99% of DSMAX. DB2 closes these data sets. CLOSE YES data sets are chosen before CLOSE NO data sets. |
| DS CONVERTED R/W TO R/O                    | Number of data sets switched from R/W to R/O (QTPCCT) This counter is incremented when a data set has not been updated for a specified number of checkpoints (ZPARM PCLOSEN) or a specified number of minutes (ZPARM PCLOSET). This feature speeds recovery by posting a SYSLGRNX or SYSLGRNG close entry. This means that fewer log records are necessary to accomplish a recovery since DB2 knows that no updates have been applied while the data set is marked read-only. The data set is switched back to R/W automatically at the first update SQL statement. |
Optimization

This topic describes the Optimization section of the DB2 statistics detail report (BSTATDR).

**Figure 82: Optimization**

<table>
<thead>
<tr>
<th>OPTIMIZATION</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREPARE REQUESTS</td>
<td>2598</td>
<td>108.26</td>
<td>9.80</td>
<td>9.02</td>
</tr>
<tr>
<td>FULL PREPARES</td>
<td>1</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HALF PREPARES</td>
<td>2596</td>
<td>108.17</td>
<td>9.80</td>
<td>9.01</td>
</tr>
<tr>
<td>IMPLICIT PREPARES</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PREPARE AVOIDED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>STMT INVALID (MAXKEEPD)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>STMT INVALID (DDL)</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NUMBER OF REOPTIMIZATION</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DB2 PARSED DY-ST CON STMT</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DB2 REPL DY-ST CON STMT</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DB2 MATCH DY-ST CON STMT</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DB2 Duplic DY-ST CON STMT</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GLOBAL CACHE HIT RATIO%</td>
<td>99.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOCAL CACHE HIT RATIO(%)</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL DBM1 STORAGE BELOW 2GB</td>
<td>618940</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STORAGE CUSHION</td>
<td>119328</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REAL STORAGE IN USE</td>
<td>83679</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUXILIARY STORAGE IN USE</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 96 on page 276 describes the fields in the Optimization section.

**Table 96: Optimization field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREPARE REQUESTS</td>
<td>Number of requests for the dynamic statement cache (QISEDSG)</td>
</tr>
<tr>
<td>FULL PREPARES</td>
<td>Number of times DB2 searched the prepared statement cache but could not find a suitable prepared statement (QXSTNFND)</td>
</tr>
<tr>
<td>HALF PREPARES</td>
<td>Number of times DB2 satisfied a PREPARE request by making a copy of a statement in the prepared statement cache (QXSTFND)</td>
</tr>
<tr>
<td>IMPLICIT PREPARES</td>
<td>Number of times DB2 did an implicit PREPARE for a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache did not contain a valid copy of the prepared statement (QXSTIPRP)</td>
</tr>
<tr>
<td>PREPARE AVOIDED</td>
<td>Number of times DB2 did not prepare a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache contained a valid copy of the prepared statement (QXSTNPRP)</td>
</tr>
<tr>
<td>STMT INVALID (MAXKEEPD)</td>
<td>Number of times DB2 discarded a prepared statement from the prepared statement cache because the number of prepared statements in the cache exceeded the value of subsystem parameter MAXKEEPD (QXSTDEXP)</td>
</tr>
</tbody>
</table>
Field | Description
---|---
STMT INVALID (DDL) | Number of times DB2 discarded a prepared statement from the prepared statement cache because a program executed a DROP, ALTER, or REVOKE statement against a dependent object (QXSTDINV)
GLOBAL CACHE HIT RATIO% | Ratio of successful search requests for prepared statements from the global dynamic SQL cache
LOCAL CACHE HIT RATIO(%) | Local cache hit ratio. This shows the percentage of SQL statements that avoided prepares because the statements were retrieved from the local cache and indicates the effectiveness of the local SQL statement cache.

**Parallelism**

This topic describes the Parallelism section of the DB2 statistics detail report (BSTATDR).

*Figure 83: Parallelism*

<table>
<thead>
<tr>
<th>PARALLELISM</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX DEGREE OF PARALLELISM</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PARALLEL GROUPS EXECUTED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>EXECUTED AS PLANNED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REDUCED DEGREE-N0 BUFFER</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FALL TO SEQUENTIAL-CURSOR</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FALL TO SEQUENTIAL-N0 ESA</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FALL TO SEQUENT’L-N0 BUFF</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FALL TO SEQUENT’L-N0 ENC</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ONE DB2 -COORDINATOR=N0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ONE DB2 - ISOLATION LEVEL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ONE DB2 - DCL TTABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REFORM PARAL-CONFIG CHND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REFORM PARAL-N0 BUFFER</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GROUPS INTFNDED - SYSPLEX</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>MEMBER SKIPPED - BFRR</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 97 on page 277 describes the fields in the Parallelism section.

**Table 97: Parallelism field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX DEGREE OF PARALLELISM</td>
<td>Maximum degree of parallel processing executed (QXMAXDEG) This counter is set to the high-water mark among all parallel groups executed with I/O or CP parallelism. Degree measures the number of parallel processes active for a parallel group.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PARALLEL GROUPS EXECUTED</td>
<td>Number of parallel groups executed (QXTOTGRP) This counter reflects the total number of parallel groups executed. <strong>Tuning Tip:</strong> This number can provide the tuner with a good idea when peak periods exist which might require more buffer pool size or a higher parallel processing percentage of a buffer pool might be necessary.</td>
</tr>
<tr>
<td>EXECUTED AS PLANNED</td>
<td>Number of parallel groups executed at planned degree (QXNORGRP) This counter is incremented when the number of parallel tasks (degree) at execution time equal the number of parallel tasks planned at BIND time. <strong>Tuning Tip:</strong> The higher this number is, the better DB2 is tuned. This is the ideal situation.</td>
</tr>
<tr>
<td>REDUCED DEGREE—NO BUFFER</td>
<td>Number of parallel groups degraded due to buffer shortage (QXREDGRP) This counter is incremented when the buffer pool does not have enough buffer storage to support as many degrees of parallel processing as had been planned. DB2 checks buffer allocations at both BIND and execution time. It assumes that buffers will be set aside for parallel processing. If at execution time, a similar number of buffers do not exist, DB2 degrades the parallel processes to a lesser degree or no parallelism. <strong>Tuning Tip:</strong> Three parameters can be altered (ALTER BUFFERPOOL command) to resolve this situation. The overall size of the buffer pool is controlled by the VPSIZE (virtual pool size) parameter. The amount of sequential buffers is set by the VPSEQT (virtual pool sequential threshold) parameter. In the amount of buffers reserved for sequential processing, a reserve of buffers available for parallel processing must be maintained by the VPPSEQT (virtual pool parallel sequential threshold) parameter. If a significant number of parallel processes are degraded due to buffer shortage or contention, consider using a different buffer pool or altering the buffer pool used so that enough parallel sequential buffers are present.</td>
</tr>
<tr>
<td>FALL TO SEQUENTIAL—CURSOR</td>
<td>Parallel group fallback to sequential due to updateable cursor (QXDEGCUR) This counter is incremented when DB2 detects a cursor that is not clearly read-only and falls back from the planned parallel processing to sequential access. <strong>Tuning Tip:</strong> To resolve this problem, the application program should have a cursor which is unambiguously read-only, with updates through another cursor or statement.</td>
</tr>
<tr>
<td>FALL TO SEQUENTIAL—NO ESA</td>
<td>Parallel group fallback to sequential due to lack of sort assist (QXDEGESA) This counter is incremented when DB2 detects that the hardware sort assist facility is not present to logically partition the DB2 temporary DSNDB07 work files. The parallel sort operation falls back to sequential. <strong>Tuning Tip:</strong> This situation occurs until the necessary hardware assist is purchased.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FALL TO SEQUENT'L—NO BUFF</td>
<td>Parallel group fallback to sequential due to buffer shortage (QXDEGBUF)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the buffer pool does not have enough buffers to support parallel processing. DB2 checks buffer allocations at both BIND and execution time. It assumes that buffers will be set aside for parallel processing. If at execution time, a similar number of buffers do not exist, DB2 degrades the parallel processes to a lesser degree or no parallelism.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Three parameters can be altered (ALTER BUFFERPOOL command) to resolve this situation. The overall size of the buffer pool is controlled by the VPSIZE (virtual pool size) parameter. The amount of sequential buffers is set by the VPSEQT (virtual pool sequential threshold) parameter. In the amount of buffers reserved for sequential processing, a reserve of buffers available for parallel processing must be maintained by the VPPSEQT (virtual pool parallel sequential threshold) parameter. If a significant number of parallel processes are degraded due to buffer shortage or contention, consider using a different buffer pool or altering the buffer pool used so that enough parallel sequential buffers are present.</td>
</tr>
<tr>
<td>FALL TO SEQUENT'L—NO ENC</td>
<td>Parallel group fallback to sequential due to enclave services unavailable (QXDEGENC)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when DB2 detects that MVS 5.2 enclave support is unavailable to support parallel CP processing. The parallel group falls back to sequential.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> MVS enclave support sets objectives for parallel tasks to perform within service goals set by management in the MVS Workload Manager. The DB2 parallel tasks run as enclave SRBs. The solution is to migrate this system to MVS 5.2 as soon as practical to do so.</td>
</tr>
<tr>
<td>ONE DB2—COORDINATOR=NO</td>
<td>Number of parallel groups executed on a single DB2 due to one of the following reasons (QXCOORNO):</td>
</tr>
<tr>
<td></td>
<td>■ When the plan or package was bound, the COORDINATOR subsystem parameter was set to YES, but the parameter is set to NO when the program runs.</td>
</tr>
<tr>
<td></td>
<td>■ The plan or package was bound on a DB2 with the COORDINATOR subsystem parameter set to YES, but the program is being run on a different DB2 that has the COORDINATOR value set to NO.</td>
</tr>
<tr>
<td>ONE DB2—ISOLATION LEVEL</td>
<td>Number of parallel groups executed on a single DB2 because the plan or package was bound with an isolation value of repeatable read or read stability (QXISORR)</td>
</tr>
<tr>
<td>ONE DB2—DCL TTABLE</td>
<td>Number of parallel groups that are part of a query block using a user-defined function with a Declared Temporary Table (QXDEGDTT)</td>
</tr>
<tr>
<td>REFORM PARAL—CONFIG CHND</td>
<td>Total number of parallel groups for which DB2 reformulated the parallel portion of the access path because the sysplex configuration at run time was different from the sysplex configuration at bind time (QXREPOPI)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented only by the parallelism coordinator at run time.</td>
</tr>
<tr>
<td>REFORM PARAL—NO BUFFER</td>
<td>Total number of parallel groups for which DB2 reformulated the parallel portion of the access path because there was not enough buffer pool resource (QXREPOP2)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented only by the parallelism coordinator at run time.</td>
</tr>
<tr>
<td>GROUPS INTENDED—SYSPLEX</td>
<td>Total number of groups that were intended to run across the data sharing group (Symplex parallelism) (QXXCBPMX)</td>
</tr>
</tbody>
</table>
### Member skipped—BFRS

**Description**

Number of times the parallelism coordinator had to bypass a DB2 when distributing tasks because there was not enough buffer pool storage on one or more DB2 members (QXXCSKIP).

This field is incremented only on the parallelism coordinator, and it is incremented only once per parallel group, even though it is possible that more than one DB2 has a buffer pool shortage for that parallel group.

**Tuning Tip:** The purpose of this count is to indicate that there are not enough buffers on one or more members. Therefore, this count is incremented only when the buffer pool is defined to allow parallelism. For example, if VPXPSEQT=0 on an assistant, DB2 does not send parallel work there, but this count is not incremented.

---

**Plan/package processing**

This topic describes the Plan/package processing section of the DB2 statistics detail report (BSTATDR).

**Figure 84: Plan/package processing**

<table>
<thead>
<tr>
<th>PLAN/PACKAGE PROCESSING</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN ALLOC ATTEMPTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PLAN ALLOC SUCCESSFUL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PACKAGE ALLOC ATTEMPTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PACKAGE ALLOC SUCCESSFUL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PLANS BOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND ADD SUBCMDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND REPLACE SUBCMDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TEST BINDS NO PLAN-ID</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PACKAGES BOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND ADD PKG SUBCMDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND REPLACE PKG SUBCMDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REBIND PKG SUBCMDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ATTEMPT TO REBIND PACKAGE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTOMATIC BIND ATTEMPTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTOMATIC BINDS SUCCESS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTO BIND INVALID RES ID</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTO BIND PACKAGE ATTEMPT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTO BIND PACKAGE SUCCESS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REBIND SUBCOMMANDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ATTEMPT TO REBIND A PLAN</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PLANS REBOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PACKAGES REBOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FREE PLAN SUBCOMMANDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ATTEMPTS TO FREE A PLAN</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PLANS FREED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FREE PACKAGE SUBCOMMANDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ATTEMPTS TO FREE PACKAGE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PACKAGES FREED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>INCREMENTAL BINDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 98 on page 281 describes the fields in the Plan/package processing section.
### Table 98: Plan/package processing field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| PLAN ALLOC ATTEMPTS           | Plan allocation attempts (QTALLOCA)  
This counter is incremented each time a calling program attempts to allocate a bound plan to create a thread. Plan allocation occurs at the first SQL statement in the unit of work. Plan allocation results in the necessary sections of the skeleton cursor/skeleton package tables being loaded into the EDM pool if not already present. |
| PLAN ALLOC SUCCESSFUL         | Number of successful bound plan allocations (QTALLOC)  
This counter is incremented every time a bound plan is successfully allocated.  
**Tuning Tip:** Allocation may fail if the plan is locked (such as during another program BIND) or if the plan name is nonexistent. |
| PACKAGE ALLOC ATTEMPTS        | Package allocation attempts (QTPKALLA)  
This counter is incremented each time a calling program attempts to allocate a bound package. Package allocation occurs at the first SQL statement in the package. Package allocation results in the necessary sections of the skeleton package tables being loaded into the EDM pool if not already present. |
| PACKAGE ALLOC SUCCESSFUL      | Number of successful package allocations (QTPKALL)  
This counter is incremented every time a bound package is successfully allocated. Packages allocation may fail if the relevant pages were locked (such as during another program BIND) or the package name is nonexistent. |
| PLANS BOUND                   | Number of plans successfully bound (QTPLNBD)  
This counter is incremented each time plans are bound and stored for later allocation. This reflects the total number of BIND ADD and REPLACE operations that have been done. |
| BIND ADD SUBCMDS              | Number of BIND ADD subcommands issued (QTBINDA)  
This counter is incremented when a BIND ADD is attempted, whether successful or not.  
**Tuning Tip:** Bind activity should be monitored so it does not take place during prime production hours. This information can help determine when BIND activity occurs. |
| BIND REPLACE SUBCMDS          | Number of BIND REPLACE subcommands issued (QTBINDR)  
This counter is incremented when a BIND REPLACE is attempted, whether successful or not.  
**Tuning Tip:** Bind activity should be monitored so it does not take place during prime production hours. This information can help determine when BIND activity occurs. |
| REBIND PKG SUBCMDS            | Number of REBIND subcommands issued (QTREBIND)  
This number is incremented for every REBIND issued. REBIND rebuilds the access path without a change in program or SQL code; BIND REPLACE implies a change in code. |
| TEST BINDS NO PLAN-ID         | Number of BIND subcommands issued without a plan ID (QTTESTB)  
This count is incremented each time a BIND (*) is successfully completed.  
**Tuning Tip:** Normally, BIND should be run with a valid plan name.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| PACKAGES BOUND              | Number of packages successfully bound (QTPKGBD)  
This number is incremented for each package that is successfully bound and stored for later allocations. The packages are stored in the SPT01 directory table. |
| BIND ADD PKG SUBCMDS        | Number of BIND ADD PACKAGE subcommands issued (QTBINDPA)  
This counter is incremented for each BIND ADD PACKAGE commands issued. This number includes successful and unsuccessful BIND ADD PACKAGE counts. |
| BIND REPLACE PKG SUBCMDS    | Number of BIND REPLACE PACKAGE subcommands issued (QTBINDPR)  
This counter is incremented for each BIND REPLACE PACKAGE command issued. This number includes successful and unsuccessful BIND REPLACE PACKAGE counts. |
| REBIND PACKAGE SUBCMDS      | Number of REBIND PACKAGE subcommands issued (QTRBINDP)  
This counter is incremented for each REBIND PACKAGE command issued. More than one package can be rebound in a single command. |
| ATTEMPT TO REBIND PACKAGE   | Number of attempts to rebind a package                                                                                                                                                                     |
| AUTOMATIC BIND ATTEMPTS     | Number of automatic BINDs attempted (QTABINDA)  
This counter is incremented when DB2 attempts to automatically bind a plan that has been rendered invalid by an operation such as dropping an index. |
| AUTOMATIC BINDS SUCCESS     | Number of successful automatic BINDs (QTABIND)  
This counter is incremented if an automatic rebind is successful. |
| AUTO BIND INVALID RES ID    | Automatic BIND with invalid resource IDs (QTINVRID)  
This counter is incremented every time an automatic rebind occurs when a necessary structure (such as a table or table space) is no longer present. This number is the count of failed plan or package allocation attempts caused by missing or unavailable resources. When automatic rebind fails, a message is normally produced in the MSTR job log with the reason code for the failure. |
| AUTO BIND PACKAGE ATTEMPT   | Number of automatic BIND PACKAGEs attempted (QTAUTOBA)  
This counter is incremented when DB2 attempts to automatically bind a package that has been rendered invalid by an operation such as dropping an index. |

**Tuning Tip:** If the DSNZPARM parameter ABIND is set to YES (the default), DB2 attempts to automatically rebind plans which have been rendered invalid by the dropping of a resource necessary to fulfill an access path. This BIND operates under SYSOPR command authority. If successful, the SQL may use different access paths; however, automatic rebind can fail due to lock timeouts if other pages in the catalog currently have locks pending. A plan/package be cannot run during the bind process.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Tuning Tip</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO BIND PACKAGE SUCCESS</td>
<td>Number of successful automatic BIND PACKAGEs (QTPKABND)                                                                                                                                                     This counter is incremented if an automatic rebind of a package is successful. <code>&lt;br&gt;</code> <strong>Tuning Tip:</strong> Automatic rebinds may be unsuccessful if necessary tables have been dropped or if resources are unavailable, such as locks existing on the directory or catalog.</td>
<td></td>
</tr>
<tr>
<td>REBIND SUBCOMMANDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATTEMPT TO REBIND A PLAN</td>
<td>Number of attempts to rebind a plan (QTRBINDA)                                                                                                                                                    This number is incremented with the number of attempts to rebind a plan. This number can be more than one plan per rebind command since wildcarding is allowed, and that could rebind many plans.</td>
<td></td>
</tr>
<tr>
<td>PLANS REBOUND</td>
<td>Number of times a plan was successfully rebound (QTPLNRBD)                                                                                                                                           This counter is incremented each time a REBIND of a plan is successful. <code>&lt;br&gt;</code> <strong>Tuning Tip:</strong> Typical reasons for not being successful are catalog/directory locks (the plan is running when the attempt to REBIND is made) or a necessary structure (table or table space) is not available.</td>
<td></td>
</tr>
<tr>
<td>FREE PLAN SUBCOMMANDS</td>
<td>Number of FREE subcommands issued (QTFREE)                                                                                                                                                    This number represents the total number of FREE plan attempts that complete successfully. Plans cannot be freed while executing.</td>
<td></td>
</tr>
<tr>
<td>ATTEMPTS TO FREE A PLAN</td>
<td>Number of attempts to FREE a plan (QTFREEA)                                                                                                                                                    This counter is incremented for each plan attempted to be freed. More than one plan can be FREEd in a single command.</td>
<td></td>
</tr>
<tr>
<td>PLANS FREED</td>
<td>Number of plans FREEd (QTPLNFRD)                                                                                                                                                                    This number represents the total number of FREE plan attempts that complete successfully. Plans cannot be freed while executing.</td>
<td></td>
</tr>
<tr>
<td>FREE PACKAGE SUBCOMMANDS</td>
<td>Number of FREE PACKAGE subcommands issued (QTFREEP)                                                                                                                                                This counter is incremented once for each FREE PACKAGE command issued. More than one package can be FREEd in a single command.</td>
<td></td>
</tr>
<tr>
<td>ATTEMPTS TO FREE PACKAGE</td>
<td>Number of attempts to FREE a package (QTFREEAP)                                                                                                                                                    This counter is incremented once for each attempt to FREE a package. More than one package can be FREEd in a single command.</td>
<td></td>
</tr>
<tr>
<td>PACKAGES FREED</td>
<td>Number of packages FREEd (QTPKGFRD)                                                                                                                                                                   This number represents the total number of FREE package attempts that complete successfully. Packages cannot be FREEd while executing.</td>
<td></td>
</tr>
<tr>
<td>INCREMENTAL BINDS</td>
<td>Number of incremental BINDs performed (QXINCRB)                                                                                                                                                         This counter is incremented every time a plan is run that had been bound with the VALIDATE(RUN) option. <code>&lt;br&gt;</code> <strong>Tuning Tip:</strong> It is generally undesirable to bind a plan with the VALIDATE(RUN) option since all SQL statements must be rechecked for syntax, authority, and access path every time the plan is executed. VALIDATE(RUN) is required if the program is going to CREATE TABLES (for example, work tables) during the execution, or if testing is required on a piece of code for which the objects do not yet exist. Otherwise, VALIDATE(RUN) should be avoided, as the cost is nearly that of dynamic SQL.</td>
<td></td>
</tr>
</tbody>
</table>
RID list processing

This topic describes the RID list processing section of the DB2 statistics detail report (BSTATDR).

Figure 85: RID list processing

<table>
<thead>
<tr>
<th>RID LIST PROCESSING</th>
<th>QUANTITY /MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX RID BLOCKS ALLOCATED</td>
<td>3</td>
<td>0.13</td>
<td>0.01</td>
</tr>
<tr>
<td>CURRENT RID BLOCKS ALLOC</td>
<td>2</td>
<td>0.08</td>
<td>0.01</td>
</tr>
<tr>
<td>TERMINATED - NO STORAGE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TERM'D-EXCEED RDS LIMIT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TERM'D-EXCEED DM LIMIT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TERM'D-EXCEED PROC LIMIT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TIMES OWFL NO RID STRG</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TIMES OWFL NO RID INTLMT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TIMES HYBRD JOIN INT STRG</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TIMES HYBRD JOIN INT INTL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TIMES MIAP SKIPPED PRE_OT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 99 on page 284 describes the fields in the RID list processing section.

Table 99: RID list processing field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX RID BLOCKS_ALLOCATED</td>
<td>Maximum number of RID blocks in use (QISTRHIG)</td>
</tr>
<tr>
<td></td>
<td>This value is the maximum number of RID blocks in use at any one time.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If this number is at the RID pool size, check for failures. Increase the DSNZPARM parameter MAXRBLK in DSNZPARM to the maximum possible to support list prefetch and multiple index access paths.</td>
</tr>
<tr>
<td>CURRENT RID BLOCKS_ALLOC</td>
<td>Current number of RID blocks in use (QISTRCUR)</td>
</tr>
<tr>
<td></td>
<td>This value is a snapshot of the number of RID blocks in use.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If this number is at the RID pool size, check for failures. Increase the DSNZPARM parameter MAXRBLK in DSNZPARM to the maximum possible to support list prefetch and multiple index access paths.</td>
</tr>
<tr>
<td>TERMINATED - NO STORAGE</td>
<td>Number of RID pool failures--storage exceeded (QISTRSTG)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time a RID pool failure occurred due to a lack of storage.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Increase the DSNZPARM parameter MAXRBLK in DSNZPARM to the maximum possible to support list prefetch and multiple index access paths.</td>
</tr>
<tr>
<td>TERM'D-EXCEED RDS LIMIT</td>
<td>Number of RID pool failures--RID limit (QISTRLLM)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time a RID pool failure occurred due to a single set of index entries occupying more than 50% of the RID pool.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This number should be as close to zero as possible since the query degrades to a table space scan if a failure occurs. Increase the size of the RID pool in DSNZPARM MAXRBLK on installation panel DSNTIPC.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| TERM'D-EXCEED DM LIMIT                    | Number of RID pool failures—data manager limit (QISTRPLM)  
This counter is incremented when a very large RID list is encountered. The maximum RID list is 16 million RIDS.  
**Tuning Tip:** To avoid this, change the SQL statement so a different access path is chosen. If a failure does occur, the query is run as a table space scan. |
| TERM'D-EXCEED PROC LIMIT                  | Number of RID pool failures—too many concurrent users (QISTRMAX)  
This counter is incremented every time a RID pool failure occurred because there were too many concurrent users.  
**Tuning Tip:** Increase the DSNZPARM parameter MAXRBLK in DSNZPARM to the maximum possible to support list prefetch and multiple index access paths. |
| TIMES OVWFL NO RID STRG                   | Number of times the RID list overflowed due to no storage available                                                                                                                                          |
| TIMES OVWFL NO RID INTLMT                 | Number of times the RID list overflowed due to internal limits                                                                                                                                               |
| TIMES HYBRD JOIN INT STRG                 | Number of times RID appending hybrid-join was interrupted due to storage limitations                                                                                                                       |
| TIMES HYBRD JOIN INT INTL                 | Number of times RID appending hybrid-join was interrupted due to internal limits                                                                                                                           |
| TIMES MIAP SKIPPED PRE_OT                 | Number of times multi-index access was not performed                                                                                                                                                        |

These 2 I gave you are correct:

**ROW ID**

This topic describes the ROW ID section of the DB2 statistics detail report (BSTATDR).

**Figure 86: ROW ID**

<table>
<thead>
<tr>
<th>ROW ID</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECT ACCESS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>INDEX USED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TABLE SPACE SCAN USED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 100 on page 286 describes the fields in the ROW ID section.
Table 100: ROW ID field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECT ACCESS</td>
<td>Number of times that DB2 used direct row access to locate a record (QXROIMAT)</td>
</tr>
<tr>
<td>INDEX USED</td>
<td>Number of times that DB2 attempted to use direct row access but reverted to using an index to locate a record (QXROIIDX)</td>
</tr>
<tr>
<td>TABLE SPACE SCAN USED</td>
<td>Number of times that DB2 attempted to use direct row access but reverted to using a table space scan to locate a record (QXROITS)</td>
</tr>
</tbody>
</table>

SQL DCL

This topic describes the SQL DCL section of the DB2 statistics trace—long report (BSTATLT).

Figure 87: SQL DCL

<table>
<thead>
<tr>
<th>SQL DCL</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GRANT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REVOKE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET CURRENT SQLID</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET HOST VARIABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET CURRENT DEGREE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET CURRENT RULES</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CONNECT TYPE 1</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CONNECT TYPE 2</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RELEASE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET CONNECTION</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET CURRENT PATH</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SET CURRENT PRECISION</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASSOCIATE LOCATORS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALLOCATE LOCATORS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HOLD LOCATOR</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FREE LOCATOR</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 101 on page 286 describes the fields in the SQL DCL section.

Table 101: SQL DCL field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK TABLE</td>
<td>Number of LOCK TABLE statements executed (either SHARE or EXCLUSIVE) (QXLOCK)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>GRANT</td>
<td>Number of GRANT statements executed (QXGRANT)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This field is useful for the auditor who wishes to monitor the grants of authority by user. Other audit traces can be activated to capture which authorities were granted. The catalog can also be queried.</td>
</tr>
<tr>
<td>REVOKE</td>
<td>Number of REVOKE statements executed (QXREVOKE)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This field is useful for the auditor who wants to monitor the revocations of authority by user. Other audit traces can be activated to capture which authorities were revoked.</td>
</tr>
<tr>
<td>SET CURRENT SQLID</td>
<td>Number of SET CURRENT SQLID statements executed (QXSETSQL)</td>
</tr>
<tr>
<td>SET HOST VARIABLE</td>
<td>Number of SET HOST VARIABLE statements executed (QXSETHV)</td>
</tr>
<tr>
<td>SET CURRENT DEGREE</td>
<td>Number of SET CURRENT DEGREE statements executed (QXSETCDG)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This number is a count of the SQL SET CURRENT DEGREE statements processed for the application. This register enables or disables parallel processing for dynamic SQL.</td>
</tr>
<tr>
<td>SET CURRENT RULES</td>
<td>Number of SET CURRENT RULES statements executed (QXSETCRL)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This number is a count of the SQL SET CURRENT RULES statements processed for the application. This register is used to change syntax parsing from SQL rules to ANSI/SQL processing.</td>
</tr>
<tr>
<td>CONNECT TYPE 1</td>
<td>Number of Type 1 CONNECT statements executed (QXCON1)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This value is a count of the number of Type 1 SQL CONNECT statements processed for the application.</td>
</tr>
<tr>
<td>CONNECT TYPE 2</td>
<td>Number of Type 2 CONNECT statements executed (QXCON2)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This value is a count of the number of Type 2 CONNECT SQL statements processed for the application.</td>
</tr>
<tr>
<td>RELEASE</td>
<td>Number of RELEASE statements issued (QXREL)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This number is a count of the SQL RELEASE statements processed for the application.</td>
</tr>
<tr>
<td>SET CONNECT</td>
<td>Number of SET CONNECTION statements executed (QXSETCON)</td>
</tr>
<tr>
<td><strong>Tuning Tip:</strong></td>
<td>This number is a count of the SQL SET CONNECTION statements processed for the application.</td>
</tr>
<tr>
<td>SET CURRENT PATH</td>
<td>Number of SET CURRENT PATH statements executed (QXSETPTH)</td>
</tr>
<tr>
<td>SET CUR PRECISION</td>
<td>Number of SET CURRENT PRECISION statements executed (QXSETCPR)</td>
</tr>
<tr>
<td>CALL</td>
<td>Number of CALL statements executed (QXCALL)</td>
</tr>
</tbody>
</table>
Statistics report fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSOCIATE LOCATORS</td>
<td>Number of ASSOCIATE LOCATOR statements executed (QXALOCL)</td>
</tr>
<tr>
<td></td>
<td>These statements get the result set locator value for each result set returned by a stored procedure.</td>
</tr>
<tr>
<td>ALLOCATE LOCATORS</td>
<td>Number of ALLOCATE LOCATORS statements executed (QXALOCC)</td>
</tr>
<tr>
<td>HOLD LOCATOR</td>
<td>Number of HOLD LOCATOR statements executed (QXHOLDL)</td>
</tr>
<tr>
<td>FREE LOCATOR</td>
<td>Number of FREE LOCATOR statements executed (QXFREEL)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of DCL statements executed</td>
</tr>
<tr>
<td></td>
<td>QXLOCK + QXGRANT + QXREVOK + QXSETSQL + QXSETHV + QXSETCDG + QXSETCRL + QXCON1 + QXCON2 + QXSETCON + QXREL + QXCALL + QXHOLDL + QXFREEL</td>
</tr>
</tbody>
</table>

SQL DDL

This topic describes the SQL DDL section of the DB2 statistics detail report (BSTATDR).

**Figure 88: SQL DDL**

<table>
<thead>
<tr>
<th>SQL DDL</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATE TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE TEMP TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DECLARE GLBL TEMP TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE AUXILIARY TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE INDEX</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE VIEW</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE SYNONYM</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE TABLESPACE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE DATABASE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE STOGROUP</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE ALIAS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE DISTINCT TYPE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE FUNCTION</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE PROCEDURE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE TRIGGER</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CREATE SEQUENCE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER INDEX</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER TABLESPACE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER DATABASE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER STOGROUP</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER FUNCTION</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER PROCEDURE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER SEQUENCE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ALTER VIEW</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DROP TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DROP INDEX</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DROP VIEW</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DROP SYNONYM</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DROP TABLESPACE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DROP DATABASE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table 102 on page 289 describes the fields in the SQL DDL section.

Table 102: SQL DDL field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATE TABLE</td>
<td>Number of CREATE TABLE statements executed (QXCRTAB)</td>
</tr>
<tr>
<td>CREATE TEMP TABLE</td>
<td>Number of CREATE GLOBAL TEMPORARY TABLE statements executed (QXCRGTT)</td>
</tr>
<tr>
<td>DECLARE GLBL TEMP TABLE</td>
<td>Number of SQL DECLARE GLOBAL TEMPORARY TABLE statements</td>
</tr>
<tr>
<td>CREATE AUX TABLE</td>
<td>Number of CREATE AUXILIARY TABLE statements executed (QXCRATB)</td>
</tr>
<tr>
<td>CREATE INDEX</td>
<td>Number of CREATE DATABASE statements executed (QXCRINX)</td>
</tr>
<tr>
<td>CREATE VIEW</td>
<td>Number of CREATE VIEW statements executed (QXCRTAB)</td>
</tr>
<tr>
<td>CREATE SYNONYM</td>
<td>Number of CREATE SYNONYM statements executed (QXCRSYN)</td>
</tr>
<tr>
<td>CREATE TABLESPACE</td>
<td>Number of CREATE TABLESPACE statements executed (QXCTABS)</td>
</tr>
<tr>
<td>CREATE DATABASE</td>
<td>Number of CREATE DATABASE statements executed (QXCRDAB)</td>
</tr>
<tr>
<td>CREATE STOGROUP</td>
<td>Number of CREATE STOGROUP statements executed (QXCRSTG)</td>
</tr>
<tr>
<td>CREATE ALIAS</td>
<td>Number of CREATE ALIAS statements executed (QXCRALS)</td>
</tr>
<tr>
<td>CREATE DISTINCT TYPE</td>
<td>Number of CREATE DISTINCT TYPE statements executed (QXCDIST)</td>
</tr>
<tr>
<td>CREATE FUNCTION</td>
<td>Number of CREATE FUNCTION statements executed (QXCRUDF)</td>
</tr>
<tr>
<td>CREATE PROCEDURE</td>
<td>Number of CREATE PROCEDURE statements executed (QXCRPRO)</td>
</tr>
<tr>
<td>CREATE SEQUENCE</td>
<td>Number of CREATE SEQUENCE statements executed (QXCRESEQ)</td>
</tr>
<tr>
<td>ALTER TABLE</td>
<td>Number of ALTER TABLE statements executed (QXALTMTA)</td>
</tr>
<tr>
<td>ALTER INDEX</td>
<td>Number of ALTER INDEX statements executed (QXALTIX)</td>
</tr>
<tr>
<td>ALTER TABLESPACE</td>
<td>Number of ALTER TABLESPACE statements executed (QXALTTS)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ALTER DATABASE</td>
<td>Number of ALTER DATABASE statements executed (QXALDAB)</td>
</tr>
<tr>
<td>ALTER STOGROUP</td>
<td>Number of ALTER STOGROUP statements executed (QXALTST)</td>
</tr>
<tr>
<td>ALTER FUNCTION</td>
<td>Number of ALTER FUNCTION statements executed (QXALUDF)</td>
</tr>
<tr>
<td>ALTER PROCEDURE</td>
<td>Number of ALTER PROCEDURE statements executed (QXALPRO)</td>
</tr>
<tr>
<td>ALTER SEQUENCE</td>
<td>Number of ALTER SEQUENCE statements executed (QXALTSEQ)</td>
</tr>
<tr>
<td>ALTER VIEW</td>
<td>Number of ALTER VIEW statements executed (QXALT VW)</td>
</tr>
<tr>
<td>DROP TABLE</td>
<td>Number of DROP TABLE statements executed (QXDRPTA)</td>
</tr>
<tr>
<td>DROP INDEX</td>
<td>Number of DROP INDEX statements executed (QXDRPIX)</td>
</tr>
<tr>
<td>DROP VIEW</td>
<td>Number of DROP VIEW statements executed (QXDRPVU)</td>
</tr>
<tr>
<td>DROP SYNONYM</td>
<td>Number of DROP SYNONYM statements executed (QXDRPSY)</td>
</tr>
<tr>
<td>DROP TABLESPACE</td>
<td>Number of DROP TABLESPACE statements executed (QXDRPTS)</td>
</tr>
<tr>
<td>DROP DATABASE</td>
<td>Number of DROP DATABASE statements executed (QXDRPDB)</td>
</tr>
<tr>
<td>DROP STOGROUP</td>
<td>Number of DROP STOGROUP statements executed (QXDRPST)</td>
</tr>
<tr>
<td>DROP ALIAS</td>
<td>Number of DROP ALIAS statements executed (QXDRP AL)</td>
</tr>
<tr>
<td>DROP PACKAGE</td>
<td>Number of DROP PACKAGE statements executed (QXDRPPKG)</td>
</tr>
<tr>
<td>DROP DISTINCT TYPE</td>
<td>Number of DROP DISTINCT TYPE statements executed (QXDDIST)</td>
</tr>
<tr>
<td>DROP FUNCTION</td>
<td>Number of DROP FUNCTION statements executed</td>
</tr>
<tr>
<td>DROP PROCEDURE</td>
<td>Number of DROP PROCEDURE statements executed (QXDRPRPR)</td>
</tr>
<tr>
<td>DROP TRIGGER</td>
<td>Number of DROP TRIGGER statements executed (QXDRPTR)</td>
</tr>
<tr>
<td>DROP SEQUENCE</td>
<td>Number of DROP SEQUENCE statements executed (QXDROSEQ)</td>
</tr>
<tr>
<td>RENAME TABLE</td>
<td>Number of RENAME TABLE statements executed (QXRNTAB)</td>
</tr>
<tr>
<td>COMMENT ON</td>
<td>Number of COMMENT ON statements executed (QXCMTON)</td>
</tr>
<tr>
<td>LABEL ON</td>
<td>Number of LABEL ON statements executed (QXLABON)</td>
</tr>
<tr>
<td>CREATE ROLE</td>
<td>Number of CREATE ROLE statements executed (QXCRROL)</td>
</tr>
<tr>
<td>CREATE TRUSTED CONTEXT</td>
<td>Number of CREATE TRUSTED CONTEXT statements executed (QXCRCTX)</td>
</tr>
<tr>
<td>DROP ROLE</td>
<td>Number of DROP ROLE statements executed (QXDRPROL)</td>
</tr>
<tr>
<td>DROP TRUSTED CONTEXT</td>
<td>Number of DROP TRUSTED CONTEXT statements executed (QXDRPCTX)</td>
</tr>
<tr>
<td>ALTER TRUSTED CONTEXT</td>
<td>Number of ALTER TRUSTED CONTEXT statements executed (QXALTCTX)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of SQL DDL statements executed</td>
</tr>
</tbody>
</table>
SQL DML

This topic describes the SQL DML section of the DB2 statistics trace—long report (BSTATLT).

**Figure 89 on page 291** shows the SQL DML section.

**Figure 89: SQL DML**

<table>
<thead>
<tr>
<th>SQL DML</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>145</td>
<td>20.71</td>
<td>1.69</td>
<td>0.28</td>
</tr>
<tr>
<td>INSERT</td>
<td>3</td>
<td>0.43</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>UPDATE</td>
<td>8</td>
<td>1.14</td>
<td>0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>DELETE</td>
<td>5</td>
<td>0.71</td>
<td>0.06</td>
<td>0.01</td>
</tr>
<tr>
<td>PREPARE</td>
<td>57</td>
<td>8.14</td>
<td>0.66</td>
<td>0.11</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>21</td>
<td>3.00</td>
<td>0.24</td>
<td>0.04</td>
</tr>
<tr>
<td>DESCRIBE TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>OPEN CURSOR</td>
<td>321</td>
<td>45.86</td>
<td>3.73</td>
<td>0.62</td>
</tr>
<tr>
<td>CLOSE CURSOR</td>
<td>320</td>
<td>45.71</td>
<td>3.72</td>
<td>0.62</td>
</tr>
<tr>
<td>FETCH</td>
<td>1671</td>
<td>238.71</td>
<td>19.43</td>
<td>3.21</td>
</tr>
<tr>
<td>ROWS FETCHED</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROWS INSERTED</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROWS UPDATED</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROWS DELETED</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>2551</td>
<td>364.42</td>
<td>29.66</td>
<td>4.91</td>
</tr>
</tbody>
</table>

Table 103 on page 291 describes the fields in the SQL DML section.

**Table 103: SQL DML field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>Number of embedded SELECT statements (QXSELECT)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of the single embedded SELECT statements processed for the application.</td>
</tr>
<tr>
<td>INSERT</td>
<td>Number of INSERT statements (QXINSRT)</td>
</tr>
<tr>
<td>UPDATE</td>
<td>Number of UPDATE statements (QXUPDTE)</td>
</tr>
<tr>
<td>DELETE</td>
<td>Number of DELETE statements executed (QXDELETE)</td>
</tr>
<tr>
<td>PREPARE</td>
<td>Number of PREPARE statements (QXPREP or QPPREP)</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>Number of DESCRIBE statements executed (QXDESC)</td>
</tr>
<tr>
<td>DESCRIBE TABLE</td>
<td>Number of DESCRIBE TABLE statements executed (QXDSCRTB)</td>
</tr>
<tr>
<td>OPEN CURSOR</td>
<td>Number of OPEN CURSOR statements executed (QXOPEN)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the OPEN CURSOR statement is processed for the application.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CLOSE CURSOR</td>
<td>Number of CLOSE CURSOR statements (QXCLOSE)</td>
</tr>
<tr>
<td></td>
<td>The counter is incremented when a CLOSE CURSOR statement is processed for the application. The count between a server and requester may not be equal.</td>
</tr>
<tr>
<td>FETCH</td>
<td>Number of FETCH statements executed (QXFETCH)</td>
</tr>
<tr>
<td>ROWS FETCHED</td>
<td>Number of rows fetched (QXRWSFETCHD)</td>
</tr>
<tr>
<td>ROWS INSERTED</td>
<td>Number of rows inserted (QXRWSINSRTD)</td>
</tr>
<tr>
<td>ROWS UPDATED</td>
<td>Number of rows updated (QXRWSUPDTD)</td>
</tr>
<tr>
<td>ROWS DELETED</td>
<td>Number of rows deleted (QXRWSDELETD)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of SQL DML statements executed</td>
</tr>
</tbody>
</table>

### Star Join statistics

This topic describes the Star Join statistics section of the DB2 statistics detail report (BSTATDR).

#### Figure 90: Star Join statistics

```
STAR JOIN STATISTICS
ALLOCATIONS IN SJ POOL  0  0.00  0.00  0.00
POOL FULL FAILURES     0  0.00  0.00  0.00
CURRENT SIZE IN MB     0  0.00  0.00  0.00
MAX SIZE IN MB         0  0.00  0.00  0.00
```

Table 104 on page 292 describes the fields in the Star Join statistics section.

#### Table 104: Star Join statistics field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLOCATIONS IN SJ POOL</td>
<td>Number of allocation requests in Star Join pool (QISJTRY) (DB2 8.1 and later)</td>
</tr>
<tr>
<td>POOL FULL FAILURES</td>
<td>Number of failures because the Star Join pool is full (QISJFAIL) (DB2 8.1 and later)</td>
</tr>
<tr>
<td>CURRENT SIZE IN MB</td>
<td>Current size of Star Join pool in MB (QISJSIZE) (DB2 8.1 and later)</td>
</tr>
<tr>
<td>MAX SIZE IN MB</td>
<td>Maximum size of Star Join pool in MB (QISJMAX) (DB2 8.1 and later)</td>
</tr>
</tbody>
</table>

### Stored procedures section

This topic describes the Stored procedures section of the DB2 statistics detail report (BSTATDR).
Table 105 on page 293 describes the fields in the Stored procedures section.

### Table 105: Stored procedures field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL STATEMENTS EXECUTED</td>
<td>Number of CALL statements executed (QXCALL)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented every time an application program issues a CALL statement to execute a DB2 stored procedure.</td>
</tr>
<tr>
<td>PROCEDURE ABENDED</td>
<td>Number of stored procedure abends (QXCALLAB)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when a stored procedure abends.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Large numbers here indicate that one or more stored procedures have fatal errors.</td>
</tr>
<tr>
<td>CALL STATEMENT TIMED OUT</td>
<td>Number of CALL statements timed out (QXCALLTO)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when the Stored Procedures Address Space does not have a TCB available within the time limit specified in the DSNZPARM TIMEOUT parameter to schedule the execution of an SQL CALL statement. Appropriate fixes include the following actions:</td>
</tr>
<tr>
<td></td>
<td>■ Reduce the amount of CPU service units in other stored procedures to get better throughput.</td>
</tr>
<tr>
<td></td>
<td>■ Stop stored procedures no longer needed.</td>
</tr>
<tr>
<td></td>
<td>■ Increase the number of TCBs available in the Stored Procedures Address Space (by increasing the NUMTCB parameter in the Stored Procedures Address Space JCL).</td>
</tr>
<tr>
<td>CALL STATEMENT REJECTED</td>
<td>Number of CALL statements rejected because procedure was stopped (QXCALLRJ)</td>
</tr>
<tr>
<td></td>
<td>This counter is incremented when an SQL application CALLs a stored procedure which has been stopped by the operator or system administrator.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> If this situation happens frequently, be sure the procedure is started in normal mode.</td>
</tr>
</tbody>
</table>

### Subsystem services

This topic describes the Subsystem services section of the DB2 statistics detail report (BSTATDR).
Figure 92: Subsystem services

<table>
<thead>
<tr>
<th>Subsystem Services</th>
<th>Quantity</th>
<th>/Minute</th>
<th>/Thread</th>
<th>/Commit</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDENTIFY</td>
<td>5</td>
<td>0.21</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>CREATE THREAD</td>
<td>265</td>
<td>11.04</td>
<td>1.00</td>
<td>0.92</td>
</tr>
<tr>
<td>SIGNON</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TERMINATE</td>
<td>268</td>
<td>11.17</td>
<td>1.01</td>
<td>0.93</td>
</tr>
<tr>
<td>ROLLBACK</td>
<td>1</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>COMMIT PHASE 1</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>COMMIT PHASE 2</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>READ ONLY COMMIT</td>
<td>24</td>
<td>1.00</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>UNIT REC INDOUBT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UNIT REC INDBT RSLVD</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHS(SINGLE PHASE)</td>
<td>263</td>
<td>10.96</td>
<td>0.99</td>
<td>0.91</td>
</tr>
<tr>
<td>Q'D CREATE THREAD</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SUBSYSTEM MEMORY EOT</td>
<td>1</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SUBSYSTEM MEMORY EOM</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYSTEM EVENT CHKPT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HIGH WATER MARK IDBACK</td>
<td>10</td>
<td>0.42</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>HIGH WATER MARK IDFORE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HIGH WATER MARK CTHREAD</td>
<td>10</td>
<td>0.42</td>
<td>0.04</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Table 106 on page 294 describes the fields in the Subsystem services section.

Table 106: Subsystem services field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDENTIFY</td>
<td>Successful identify requests (Q3STIDEN)</td>
</tr>
<tr>
<td></td>
<td>This reports the number of threads that have gone through successful connection processing to the DB2 being observed. Connections can be from any supported environment, such as TSO, IMS, CICS, CAF (call attach), or a utility.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: Watch for peak time spike periods. The DB2 DSNZPAREM parameters CTHREAD, IDFORE, IDBACK, and other distributed parameters should be adjusted so the system can respond to the maximum load expected.</td>
</tr>
<tr>
<td>CREATE THREAD</td>
<td>Number of create thread requests (Q3STCTHD)</td>
</tr>
<tr>
<td></td>
<td>This reflects the number of threads created (not including distributed database access threads). A thread is created at first execution of an SQL statement (assuming that no pre-existing thread for the same authorization ID and plan name exists).</td>
</tr>
<tr>
<td>SIGNON</td>
<td>Successful signon events (Q3STSIGN)</td>
</tr>
<tr>
<td></td>
<td>This field has meaning only when applied to CICS and IMS. It represents the number of times an existing thread has gone through new user signon reusing an existing thread.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: The cost of thread creation can be quite considerable in CICS transactions and IMS WFI BMP transactions. In general, it is desirable to reuse an existing thread rather than suffer the destruction and recreation of a new thread. High numbers generally indicate good thread reuse. Tuning factors which can impact this are GRANTing plans to PUBLIC (avoiding an authorization check) or utilizing the authorization cache by specifying a large enough CACHESIZE at bind time to keep as many user IDs in the EDM pool as possible.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>TERMINATE</td>
<td>Successful terminate thread requests (Q3STTERM)</td>
</tr>
<tr>
<td></td>
<td>This number reflects thread termination as a result of a program releasing resources or of</td>
</tr>
<tr>
<td></td>
<td>a thread dropping its access level from thread active back to signon and back to identify</td>
</tr>
<tr>
<td></td>
<td>status. This count will be higher than the create thread count.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: In online transactions, watch for thread creations and terminations for</td>
</tr>
<tr>
<td></td>
<td>similar transactions. Thread reuse may be achieved in CICS by raising the THRDS count in the</td>
</tr>
<tr>
<td></td>
<td>CICS resource control table; in an IMS environment, a Wait-for-Input WFI) BMP can be a useful</td>
</tr>
<tr>
<td></td>
<td>method of avoiding costly thread creations and terminations.</td>
</tr>
<tr>
<td>ROLLBACK</td>
<td>Number of successful rollbacks (Q3STABRT)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report--averages, this value is the average number of</td>
</tr>
<tr>
<td></td>
<td>aborts per CREATE THREAD during this statistics interval. This is a count of the number of</td>
</tr>
<tr>
<td></td>
<td>rollbacks taken by the system to back out a unit of recovery. Rollbacks occur because of a</td>
</tr>
<tr>
<td></td>
<td>program abend, application rollback request, deadlock or timeout situation, a -</td>
</tr>
<tr>
<td></td>
<td>CANCEL THREAD command, or some resource shortage. If it is a resource shortage, a -904 return</td>
</tr>
<tr>
<td></td>
<td>code message is displayed on the MSTR job log.</td>
</tr>
<tr>
<td>COMMIT PHASE 1</td>
<td>Successful prepare to commits (Q3STPREP)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of the number of prepare to commit requests for a two-phase commit</td>
</tr>
<tr>
<td></td>
<td>unit of work, which includes CICS update and IMS transactions. The prepare to commit is the</td>
</tr>
<tr>
<td></td>
<td>result of the end of phase 1 which causes log records to be externalized. This counter is</td>
</tr>
<tr>
<td></td>
<td>appropriate only for two-phase commit operations.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: The use of this field is to determine how much forced logging is occurring</td>
</tr>
<tr>
<td></td>
<td>as a result of end of phase 1 processing. The number of prepares for phase 1 minus the</td>
</tr>
<tr>
<td></td>
<td>successful commit phase 2 requests is the indoubt count. However, because some phase 2</td>
</tr>
<tr>
<td></td>
<td>operations are not completed in the same time interval, the number of prepares for phase 1</td>
</tr>
<tr>
<td></td>
<td>does not always agree with successful phase 2 requests.</td>
</tr>
<tr>
<td>COMMIT PHASE 2</td>
<td>Successful phase 2 requests (Q3STCOMM)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report--averages and the DB2 Statistics SQL Report, this value</td>
</tr>
<tr>
<td></td>
<td>is the average number of phase 2 commits per CREATE THREAD during this statistics interval.</td>
</tr>
<tr>
<td></td>
<td>This number is a counter of successful phase 2 commits from IMS or CICS transactions. This</td>
</tr>
<tr>
<td></td>
<td>field is not incremented for distributed two-phase commits or single unit of work tasks (for</td>
</tr>
<tr>
<td></td>
<td>example, TSO, batch).</td>
</tr>
<tr>
<td>READ-ONLY COMMIT</td>
<td>Number of read-only commits (Q3STRDON)</td>
</tr>
<tr>
<td></td>
<td>This situation occurs only in CICS and IMS when execution of a program has not updated a DB2</td>
</tr>
<tr>
<td></td>
<td>resource. When this occurs DB2 simply increments the read-only counter, performs both phases</td>
</tr>
<tr>
<td></td>
<td>of the two-phase commit process and records that the job was read-only. This count does not</td>
</tr>
<tr>
<td></td>
<td>include CICS synchronous commits.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip</strong>: This information is useful in determining the read/write ratio of a CICS or</td>
</tr>
<tr>
<td></td>
<td>IMS system.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>UNIT REC INDOUBT</td>
<td>Total number of indoubt units of recovery (Q3STINDT)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of indoubt threads, caused when a failure occurs after a successful</td>
</tr>
<tr>
<td></td>
<td>prepare but before a successful commit. The failure can occur in the address space of the</td>
</tr>
<tr>
<td></td>
<td>application, the transaction manager, DB2, or a distributed requester/server.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Most indoubt situations are resolved automatically when the participants</td>
</tr>
<tr>
<td></td>
<td>are restarted. These are counted in successful indoubt resolutions (Q3STRIUR). However, in</td>
</tr>
<tr>
<td></td>
<td>some cases, such as an operator cold starting one participant, manual resolution might be</td>
</tr>
<tr>
<td></td>
<td>required.</td>
</tr>
<tr>
<td>UNIT REC INBT RSLVD</td>
<td>Successful indoubt resolutions (Q3STRIUR)</td>
</tr>
<tr>
<td></td>
<td>This number is a count of successful indoubt thread resolutions. Indoubt situations arise when</td>
</tr>
<tr>
<td></td>
<td>a failure occurs after a successful prepare but before a successful commit. The status of</td>
</tr>
<tr>
<td></td>
<td>retained locks against resources cannot be resolved until the coordinator and all participants</td>
</tr>
<tr>
<td></td>
<td>have been recovered/restarted. This resolution usually occurs automatically, as reflected in</td>
</tr>
<tr>
<td></td>
<td>this count.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This field applies only to CICS and IMS transactions participating in two-</td>
</tr>
<tr>
<td></td>
<td>phase commit or in distributed processing using DRDA level 2 processing. In some cases, such</td>
</tr>
<tr>
<td></td>
<td>as an operator cold starting one participant, manual resolution may be required. Another</td>
</tr>
<tr>
<td></td>
<td>counter shows the total number of indoubt threads (Q3STINDT).</td>
</tr>
<tr>
<td>SYNCHS SINGLE PHASE</td>
<td>Number of successful single phase commits (Q3STSSYNC)</td>
</tr>
<tr>
<td></td>
<td>In the DB2 Statistics Overview Report--averages, this value is the average number of</td>
</tr>
<tr>
<td></td>
<td>synchronized commit requests per CREATE THREAD during this statistics interval. This is a</td>
</tr>
<tr>
<td></td>
<td>count of all synchronous commits issued by TSO, batch, CAF, and utility programs. CICS</td>
</tr>
<tr>
<td></td>
<td>applications use both synchronous commits and two-phase commits. IMS uses only two-phase</td>
</tr>
<tr>
<td></td>
<td>commits.</td>
</tr>
<tr>
<td>Q'D CREATE THREAD</td>
<td>Number of create thread requests queued (Q3STCTHW)</td>
</tr>
<tr>
<td></td>
<td>This field is a counter of how many times the maximum thread count (CTHREAD in DSNZPARM)</td>
</tr>
<tr>
<td></td>
<td>was reached and a user had to wait to acquire an available thread. It does not include DBATs.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> The general rule is to keep CTHREAD high enough to avoid thread queuing.</td>
</tr>
<tr>
<td></td>
<td>However, if memory resources are tight (and the users are willing to live with the pain), you</td>
</tr>
<tr>
<td></td>
<td>can limit CTHREAD to an arbitrary number. This limit controls memory allocation for thread</td>
</tr>
<tr>
<td></td>
<td>creation at the expense of user wait time and some overhead in keeping track of the queued</td>
</tr>
<tr>
<td></td>
<td>threads for scheduling.</td>
</tr>
<tr>
<td>SUBSYSTEM MEMORY</td>
<td>Abnormal allied memory end of task (Q3STMEOT)</td>
</tr>
<tr>
<td>EOT</td>
<td>This field is a counter of those tasks which have abended while connected to DB2. The counts</td>
</tr>
<tr>
<td></td>
<td>reflected should equal the number of Abnormal EOT messages in the MSTR job log.</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> This field is useful in determining how many abends occurred.</td>
</tr>
<tr>
<td>SUBSYSTEM MEMORY</td>
<td>Abnormal allied memory end of memory (Q3STMEOM)</td>
</tr>
<tr>
<td>EOM</td>
<td>This counter reflects program abends due to end of memory situations (such as an MVS FORCE</td>
</tr>
<tr>
<td></td>
<td>command or lack of region to successfully abend).</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Tip:</strong> Nonzero numbers in this counter should be investigated to determine why FORCE</td>
</tr>
<tr>
<td></td>
<td>commands were issued or an X78 abend occurred.</td>
</tr>
<tr>
<td>SYSTEM EVENT CHKPT</td>
<td>DB2 checkpoint count since startup</td>
</tr>
</tbody>
</table>
### Triggers

This topic describes the Triggers section of the DB2 statistics detail report (BSTATDR).

#### Figure 93: Triggers

<table>
<thead>
<tr>
<th>TRIGGERS</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATEMENT TRIGGER ACTIV</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROW TRIGGER ACTIVATED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SQL ERROR OCCURRED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 107 on page 297 describes the fields in the Triggers section.

#### Table 107: Triggers field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATEMENT TRIGGER ACTIV</td>
<td>Number of times a statement trigger is activated (QXSTTRG)</td>
</tr>
<tr>
<td>ROW TRIGGER ACTIVATED</td>
<td>Number of times a row trigger is activated (QXROWTRG)</td>
</tr>
<tr>
<td>SQL ERROR OCCURRED</td>
<td>Number of times an SQL error occurred during execution of a triggered action (QXTRGERR)</td>
</tr>
</tbody>
</table>

### User defined functions

This topic describes the User defined functions section of the DB2 statistics detail report (BSTATDR).

#### Figure 94: User defined functions

<table>
<thead>
<tr>
<th>USER DEFINED FUNCTIONS</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ABENDED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table 108 on page 298 describes the fields in the User defined functions section.

**Table 108: User defined functions field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTED</td>
<td>Number of user-defined functions executed (QXCAUD)</td>
</tr>
<tr>
<td>ABENDED</td>
<td>Number of times a user-defined function abended (QXCAUDAB)</td>
</tr>
<tr>
<td>TIMED OUT</td>
<td>Number of times a user-defined function timed out waiting to be scheduled</td>
</tr>
<tr>
<td>REJECTED</td>
<td>Number of times a user-defined function was rejected (QXCAUDRJ)</td>
</tr>
</tbody>
</table>

Virtual storage—pool details

This topic describes the Virtual storage—pool details section.

**Figure 95: Virtual storage—pool details**

<table>
<thead>
<tr>
<th>Pool Details</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total agent local storage (31-bit DBM1 prv var)</td>
<td>9 MB</td>
</tr>
<tr>
<td>Total system local storage (31-bit DBM1 prv var)</td>
<td>8 MB</td>
</tr>
<tr>
<td>Total agent local storage (64-bit DBM1 prv var)</td>
<td>92 MB</td>
</tr>
<tr>
<td>Total system local storage (64-bit DBM1 prv var)</td>
<td>65 MB</td>
</tr>
<tr>
<td>Total buffer-mgr storage (31-bit DBM1 prv var)</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total RID pool storage</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total compression dictionary storage</td>
<td>1 MB</td>
</tr>
</tbody>
</table>

Table 109 on page 298 describes the fields in the Virtual storage—pool detail section.

**Table 109: Virtual storage - pool detail field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total agent local storage (31-bit DBM1 prv var)</td>
<td>Total agent local storage (31-bit DBM1 private variable pools) (QW0225AL)</td>
</tr>
<tr>
<td>Total system local storage (31-bit DBM1 prv var)</td>
<td>Total system agent storage (31-bit DBM1 private variable pools) (QW0225AS)</td>
</tr>
<tr>
<td>Total agent local storage (64-bit DBM1 prv var)</td>
<td>Total agent local storage (64-bit shared variable pools) QW0225ALG</td>
</tr>
<tr>
<td>Total system local storage (64-bit DBM1 prv var)</td>
<td>Total system agent storage (64-bit shared variable pools) QW0225ASG</td>
</tr>
<tr>
<td>Total buffer-mgr storage (31-bit DBM1 prv var)</td>
<td>Total buffer manager storage blocks (31-bit DBM1 private variable pool) QW0225BB</td>
</tr>
</tbody>
</table>
Virtual storage—shared and common storage

This topic describes the Virtual storage—shared and common storage summary section of the Virtual storage status report (BSTATSTX).

Figure 96: Virtual storage—shared and common storage summary

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS Extended CSA size</td>
<td>500 MB</td>
</tr>
<tr>
<td>Total 31-bit common fixed pool Storage</td>
<td>3 MB</td>
</tr>
<tr>
<td>Total 31-bit variable pool Storage</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total 64-bit common fixed pool Storage</td>
<td>4 MB</td>
</tr>
<tr>
<td>Total 64-bit variable pool Storage</td>
<td>12 MB</td>
</tr>
<tr>
<td>Total 64-bit common getmained storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 64-bit common storage for stor mgr control strc</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total 64-bit shared variable pool storage</td>
<td>309 MB</td>
</tr>
<tr>
<td>Total 64-bit shared fixed pool storage</td>
<td>4 MB</td>
</tr>
<tr>
<td>Total 64-bit shared getmained storage</td>
<td>4 MB</td>
</tr>
<tr>
<td>Total 64-bit shared storage for stor mgr control strc</td>
<td>13 MB</td>
</tr>
<tr>
<td>Total 64-bit shared system agent stack</td>
<td>256 MB</td>
</tr>
<tr>
<td>Total 64-bit shared system agent stack in use</td>
<td>185 MB</td>
</tr>
<tr>
<td>Total 64-bit shared non-system agent stack</td>
<td>768 MB</td>
</tr>
<tr>
<td>Total 64-bit shared non-system agent stack in use</td>
<td>8 MB</td>
</tr>
<tr>
<td>Number of Shared Memory objects on this LPAR</td>
<td>28</td>
</tr>
<tr>
<td>Number of Shared Memory pages on this LPAR</td>
<td>704643K</td>
</tr>
<tr>
<td>High Water Mark of 64bit shared bytes on LPAR</td>
<td>3161097M</td>
</tr>
<tr>
<td>Number of 64bit shared pages backed in real strg</td>
<td>85218</td>
</tr>
<tr>
<td>Number of aux slots used for 64bit shred strg LPAR</td>
<td>127119</td>
</tr>
<tr>
<td>Number of 64bit Shared pages paged in aux strg</td>
<td>119531</td>
</tr>
<tr>
<td>Number of 64bit Shared pages paged out aux strg</td>
<td>178783</td>
</tr>
</tbody>
</table>

Table 110 on page 299 describes the fields in the Virtual storage—shared and common storage summary section.

Table 110: Virtual storage—shared and common field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS Extended CSA size</td>
<td>MVS Extended CSA size (QW0225EC)</td>
</tr>
<tr>
<td>Total 31-bit common fixed pool Storage</td>
<td>Total 31-bit common fixed pool storage (QW0225FC)</td>
</tr>
<tr>
<td>Total 31-bit variable pool Storage</td>
<td>Total 31-bit variable pool storage (QW0225VC)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Total 31-bit common getmained storage</td>
<td>Total 31-bit common getmained storage (QW0225GC)</td>
</tr>
<tr>
<td>Total 64-bit common fixed pool Storage</td>
<td>Total 64-bit common fixed pool storage (QW0225FCG)</td>
</tr>
<tr>
<td>Total 64-bit variable pool Storage</td>
<td>Total 64-bit variable pool storage (QW0225VCG)</td>
</tr>
<tr>
<td>Total 64-bit common getmained storage</td>
<td>Total 64-bit common getmained storage (QW0225GCG)</td>
</tr>
<tr>
<td>Total 64-bit common storage for stor mgr control strc</td>
<td>Total 64-bit common storage for storage manager control structures (QW0225SMC)</td>
</tr>
<tr>
<td>Total 64-bit shared variable pool storage</td>
<td>Total 64-bit shared variable pool storage (QW0225SV)</td>
</tr>
<tr>
<td>Total 64-bit shared fixed pool storage</td>
<td>Total 64-bit shared fixed pool storage (QW0225SF)</td>
</tr>
<tr>
<td>Total 64-bit shared getmained storage</td>
<td>Total 64-bit shared getmained storage (QW0225SG)</td>
</tr>
<tr>
<td>Total 64-bit shared storage for stor mgr control strc</td>
<td>Total 64-bit shared storage for manager control structures (QW0225SMS)</td>
</tr>
<tr>
<td>Total 64-bit shared system agent stack</td>
<td>Total 64-bit shared system agent stack (QW0225GSG_SYS)</td>
</tr>
<tr>
<td>Total 64-bit shared system agent stack in use</td>
<td>Total 64-bit shared system agent stack in use (QW0225SUG_SYS)</td>
</tr>
<tr>
<td>Total 64-bit shared non-system agent stack</td>
<td>Total 64-bit shared non-system agent stack (QW0225GSG)</td>
</tr>
<tr>
<td>Total 64-bit shared non-system agent stack in use</td>
<td>Total 64-bit shared non-system agent stack in use (QW0225SUG)</td>
</tr>
<tr>
<td>Number of Shared Memory objects on this LPAR</td>
<td>Number of shared memory objects allocated on this LPAR (QW0225SHRNMOB)</td>
</tr>
<tr>
<td>Number of Shared Memory pages on this LPAR</td>
<td>Number of shared memory pages on this LPAR (QW0225SHRPAGES)</td>
</tr>
<tr>
<td>High Water Mark of 64bit shared bytes on LPAR</td>
<td>High water mark of 64-bit shared bytes on LPAR (QW0225SHRGBYTES)</td>
</tr>
<tr>
<td>Number of 64bit shared pages backed in real strg</td>
<td>Number of 64-bit shared pages backed in real storage QW0225SHRINREAL)</td>
</tr>
<tr>
<td>Number of aux slots used for 64bit shred strg LPAR</td>
<td>Number of aux slots used for 64-bit shred strg LPAR (QW0225SHRAUXSLOTS)</td>
</tr>
<tr>
<td>Number of 64bit Shared pages paged in aux strg</td>
<td>Number of 64-bit shared pages paged in auxiliary storage (QW0225SHRPAGEINS)</td>
</tr>
</tbody>
</table>
Virtual storage—statement cache and XPROC detail

This topic describes the Virtual storage—statement cache and XPROC detail section of the Virtual storage status report (BSTATSTX).

Figure 97: Virtual storage—statement cache and XPROC detail

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 31-bit xPROC for Dyn SQL active threads</td>
<td>0 MB</td>
</tr>
<tr>
<td>Alloc 31-bit XProc strg for Dyn SQL active thds</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 31-bit XPROC strg for static SQL stmts</td>
<td>1 MB</td>
</tr>
<tr>
<td>HWM # of Stmt in 64bit agnt local pools</td>
<td>0</td>
</tr>
<tr>
<td>Number of statements 64bit agent local pools</td>
<td>0</td>
</tr>
<tr>
<td>HWM of # Stmt in 64bit agent local pool at high Strg</td>
<td>0</td>
</tr>
<tr>
<td>Allocated statement cache strg in 64 bit agent local</td>
<td>0 MB</td>
</tr>
<tr>
<td>HWM Alloc stmt cache strg 64 bit local pools</td>
<td>0 MB</td>
</tr>
<tr>
<td>Time Stamp of HWM for Stor alloc in 64 bit Pools</td>
<td>13:35:10</td>
</tr>
<tr>
<td>Total 64 bit STMT Cache blks 2G Storage</td>
<td>216 MB</td>
</tr>
</tbody>
</table>

Table 111 on page 301 describes the fields in the Virtual storage—statement cache and XPROC detail section.

Table 111: Virtual storage - statement cache and XPROC detail field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 31-bit xPROC for Dyn SQL active threads</td>
<td>Total 31-bit xPROC storage for dynamic SQL used by active threads (31-bit DBM1 private variable pool) (QW0225SC)</td>
</tr>
<tr>
<td>Alloc 31-bit xPROC strg for Dyn SQL active thds</td>
<td>Allocated 31-bit xPROC storage for dynamic SQL used by active threads (QW0225LS)</td>
</tr>
<tr>
<td>Total 31-bit XPROC strg for static SQL stmts</td>
<td>Total 31-bit xPROC storage for static SQL (31-bit DBM1 private variable pool) (QW0225SX)</td>
</tr>
<tr>
<td>HWM # of Stmt in 64-bit agnt local pools</td>
<td>High water mark allocated for 31-bit xPROC storage for dynamic SQL used by active threads (QW0225HS)</td>
</tr>
<tr>
<td>Number of statements 64-bit agent local pools</td>
<td>Number of statements in 64-bit agent local pools (64-bit shared agent local variable pools) (QW0225LC)</td>
</tr>
<tr>
<td>HWM of # Stmt in 64-bit agent local pool at high Strg</td>
<td>High water mark for statements in 64-bit agent local pools at high storage time (64-bit shared agent local variable pools) (QW0225HC)</td>
</tr>
<tr>
<td>Allocated statement cache strg in 64 bit agent local</td>
<td>Allocated statement cache storage in 64-bit shared agent local variable pools (QW0225L2)</td>
</tr>
<tr>
<td>HWM Alloc stmt cache strg 64 bit local pools</td>
<td>High water mark for allocated statement cache storage in 64-bit shared agent local variable pools (QW0225H2)</td>
</tr>
</tbody>
</table>
Virtual storage—storage statistics

This topic describes the Virtual storage—storage statistics section of the Virtual storage status report (BSTATSTX).

Figure 98: Virtual storage—storage statistics

<table>
<thead>
<tr>
<th>Storage Statistics</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address Space name</td>
<td>DBM1</td>
</tr>
<tr>
<td>MVS extended Region size</td>
<td>1407 MB</td>
</tr>
<tr>
<td>MVS 24 BIT LOW PRIVATE</td>
<td>0 MB</td>
</tr>
<tr>
<td>MVS 24 BIT HIGH PRIVATE</td>
<td>1 MB</td>
</tr>
<tr>
<td>MVS 31-bit extended low private</td>
<td>68 MB</td>
</tr>
<tr>
<td>MVS 31 BIT EXTENDED HI PVT</td>
<td>66 MB</td>
</tr>
<tr>
<td>Curr high addr 24bit private</td>
<td>0003C000</td>
</tr>
<tr>
<td>Curr high addr 31 bit private</td>
<td>2CE35000</td>
</tr>
<tr>
<td>31-bit storage reserved for must complete</td>
<td>141 MB</td>
</tr>
<tr>
<td>31-bit storage reserved for MVS</td>
<td>11 MB</td>
</tr>
<tr>
<td>Strg cushion warning contract</td>
<td>141 MB</td>
</tr>
<tr>
<td>Total 31-bit getmained stack</td>
<td>14 MB</td>
</tr>
<tr>
<td>Total 31-bit stack in use</td>
<td>13 MB</td>
</tr>
<tr>
<td>Total 31-bit variable pool storage</td>
<td>16 MB</td>
</tr>
<tr>
<td>Total 31-bit fixed pool storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 31-bit getmained storage</td>
<td>5 MB</td>
</tr>
<tr>
<td>Amount of available 31-bit storage</td>
<td>1273</td>
</tr>
<tr>
<td>Total 64-bit private variable pool storage</td>
<td>49 MB</td>
</tr>
<tr>
<td>Total 64-bit private fixed pool storage</td>
<td>68 MB</td>
</tr>
<tr>
<td>Total 64-bit private getmained storage</td>
<td>309 MB</td>
</tr>
<tr>
<td>Total 64-bit private storage for storage mgr ctrl-st</td>
<td>7 MB</td>
</tr>
<tr>
<td>Number of real 4K frames in use for 31,64 bit private</td>
<td>66593</td>
</tr>
<tr>
<td>Number of Aux(4K) FRAMES in use for 31,64 bit private</td>
<td>2469644</td>
</tr>
<tr>
<td># of 4K frames in use for 64 bit private(Z11)</td>
<td>50828</td>
</tr>
<tr>
<td># of 4K aux slots in use for 64 bit private(Z11)</td>
<td>227813</td>
</tr>
<tr>
<td>High Water Mark for number of Real4K frames,64bitPv</td>
<td>170352</td>
</tr>
<tr>
<td>High Water Mark Aux slots 64BIT PRIV</td>
<td>227813</td>
</tr>
</tbody>
</table>

Table 112 on page 302 describes the fields in the Storage Statistics section.

Table 112: Storage Statistics field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address Space name</td>
<td>Address space name (QW0225AN)</td>
</tr>
<tr>
<td>MVS extended Region size</td>
<td>MVS extended region size (QW0225RG)</td>
</tr>
<tr>
<td>MVS 24 BIT LOW PRIVATE</td>
<td>Amount of private MVS storage below the 16 MB line, typically used by authorized programs (QW0225LO)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MVS 24 BIT HIGH PRIVATE</td>
<td>Amount of private MVS storage below the 16 MB line, typically used by unauthorized programs (QW0225HI)</td>
</tr>
<tr>
<td>MVS 31-bit extended low private</td>
<td>Amount of private MVS storage above the 16 MB line, typically used by authorized programs (QW0225EL)</td>
</tr>
<tr>
<td>MVS 31 BIT EXTENDED HI PVT</td>
<td>Amount of private MVS storage above the 16 MB line, typically used by unauthorized programs (QW0225EH)</td>
</tr>
<tr>
<td>Curr high addr 24bit private</td>
<td>Current high address of the 24-bit private region (QW0225TP)</td>
</tr>
<tr>
<td>Curr high addr 31 bit private</td>
<td>Current high address of the 31-bit private region (QW0225EP)</td>
</tr>
<tr>
<td>31-bit storage reserved for must complete</td>
<td>Size of the 31-bit storage reserved for operations that must be completed (QW0225CR)</td>
</tr>
<tr>
<td>31-bit storage reserved for MVS</td>
<td>Size of the 31-bit storage reserved for MVS (QW0225MV)</td>
</tr>
<tr>
<td>Strg cushion warning contract</td>
<td>Storage cushion warning to contract (QW0225SO)</td>
</tr>
<tr>
<td>Total 31-bit getmained stack</td>
<td>Total 31-bit getmained stack storage (QW0225GS)</td>
</tr>
<tr>
<td>Total 31-bit stack in use</td>
<td>Total 31-bit stack storage in use (QW0225SU)</td>
</tr>
<tr>
<td>Total 31-bit variable pool storage</td>
<td>Total 31-bit variable pool storage (QW0225VR)</td>
</tr>
<tr>
<td>Total 31-bit fixed pool storage</td>
<td>Total 31-bit fixed pool storage (QW0225FX)</td>
</tr>
<tr>
<td>Total 31-bit getmained storage</td>
<td>Total 31-bit getmained storage (QW0225GM)</td>
</tr>
<tr>
<td>Amount of available 31-bit storage</td>
<td>Amount of available 31-bit storage (QW0225AV)</td>
</tr>
<tr>
<td>Total 64-bit private variable pool storage</td>
<td>Total 64-bit private variable pool storage (QW0225VA)</td>
</tr>
<tr>
<td>Total 64-bit private fixed pool storage</td>
<td>Total 64-bit private fixed pool storage (QW0225FA)</td>
</tr>
<tr>
<td>Total 64-bit private getmained storage</td>
<td>Total 64-bit private getmained storage (QW0225GA)</td>
</tr>
<tr>
<td>Total 64-bit private storage for storage mgr ctrl-st</td>
<td>Total 64-bit storage allocated for storage manager control structures (QW0225SM)</td>
</tr>
<tr>
<td>Number of real 4K frames in use for 31,64 bit private</td>
<td>Number of 4K real storage frames in use for 31-bit and 64-bit private storage (QW0225RL)</td>
</tr>
<tr>
<td>Number of Aux(4K) frames in use for 31,64 bit private</td>
<td>Number of 4K auxiliary slots in use for 31-bit and 64-bit private storage (QW0225AX)</td>
</tr>
<tr>
<td># of 4K frames in use for 64 bit private(Z11)</td>
<td>Number of 4K real storage frames is use for 64-bit private (available in z/OS 1.11 and later) (QW0225HVPagesInReal)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td># of 4K aux slots in use for 64 bit private(Z11)</td>
<td>Number of 4K auxiliary slots in use for 64-bit private (available in z/OS 1.11 and later) (QW0225HVAuxSlots)</td>
</tr>
<tr>
<td>High Water Mark for number of Real4K frames, 64bitPrv</td>
<td>High water mark for 4K real storage frames is use for 64-bit private (available in z/OS 1.11 and later) (QW0225HVGPagesInReal)</td>
</tr>
<tr>
<td>High Water Mark Aux slots 64BIT PRIV</td>
<td>High water mark for 4K auxiliary slots in use for 64-bit private (available in z/OS 1.11 and later) (QW0225HVGAuxSlots)</td>
</tr>
</tbody>
</table>

### Virtual storage—thread information

This topic describes the Virtual storage—thread information section of the Virtual storage status report (BSTATSTX).

**Figure 99: Virtual storage—thread information**

<table>
<thead>
<tr>
<th>Thread Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of active threads</td>
<td>16</td>
</tr>
<tr>
<td>Number of active and disconnected DBATS</td>
<td>0</td>
</tr>
<tr>
<td>Number of Castout Engines</td>
<td>0</td>
</tr>
<tr>
<td>Number of Deferred Write Engines</td>
<td>300</td>
</tr>
<tr>
<td>Number of GBP Write Engines</td>
<td>0</td>
</tr>
<tr>
<td>Number of Prefetch Engines</td>
<td>341</td>
</tr>
<tr>
<td>Number of P-lock/notify exit engine</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 113 on page 304 describes the fields in the Virtual storage—thread information section.

**Table 113: Virtual storage—thread information field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of active threads</td>
<td>Number of active allied threads (QW0225AT)</td>
</tr>
<tr>
<td>Number of active and disconnected DBATS</td>
<td>Number of active and disconnected DBAT threads (QW0225DB)</td>
</tr>
<tr>
<td>Number of Castout Engines</td>
<td>Number of engines used for castouts (QW0225CE)</td>
</tr>
<tr>
<td>Number of Deferred Write Engines</td>
<td>Number of engines used for deferred write operations (QW0225DW)</td>
</tr>
<tr>
<td>Number of GBP Write Engines</td>
<td>Number of engines used for group buffer pool writes (QW0225GW)</td>
</tr>
<tr>
<td>Number of Prefetch Engines</td>
<td>Number of engines used for list, sequential, and dynamic prefetch (QW0225PF)</td>
</tr>
<tr>
<td>Number of P-lock/notify exit engine</td>
<td>Number of engines used for data sharing P-lock/notify exit engines (QW0225PL)</td>
</tr>
</tbody>
</table>
Write register requests

This topic describes the Write register requests section of the DB2 statistics trace—long report (BSTATLT).

**Figure 100: Write register requests**

<table>
<thead>
<tr>
<th>WRITE REGISTER REQUESTS</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAR REQUESTS-MULTI PAGE</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>WAR REQUESTS-ONE PAGE</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>READ FOR CASTOUT-MULTI PAGE</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>READ FOR CASTOUT-ONE PAGE</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAGES WRITTEN VIA WARM</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># NOT FOUND RECORDS FOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># NOT FOUND RECORDS ADDED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># NOT FOUND RECORDS REMOVED</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># FAIL STMT SKEL POOL FULL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># PGS SKEL EDM POOL</td>
<td>1280</td>
<td>1273.55</td>
<td>106.67</td>
<td>106.67</td>
</tr>
<tr>
<td># FREE PGS IN SKEL EDM POOL</td>
<td>1268</td>
<td>1261.61</td>
<td>105.67</td>
<td>105.67</td>
</tr>
<tr>
<td># PAGES USED CT ATB</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># PAGES USED PT ATB</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># FAIL STMT ATB POOL FULL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td># PAGES STMT ATB EDM POOL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>#FREE PGS STMT ATB EDM POOL</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 89 on page 261 describes the fields in the Write register requests section.

**Table 114: Write register requests field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAR REQUESTS-MULTI PAGE</td>
<td>Number of write and register requests- multiple pages</td>
</tr>
<tr>
<td>WAR REQUESTS-ONE PAGE</td>
<td>Number of write and register requests- one page</td>
</tr>
<tr>
<td>READ FOR CASTOUT-MULTI PAGE</td>
<td>Number of read requests for castout - multiple pages</td>
</tr>
<tr>
<td>READ FOR CASTOUT-ONE PAGE</td>
<td>Number of read requests for castout - one page</td>
</tr>
<tr>
<td>PAGES WRITTEN VIA WARM</td>
<td>Number of pages written via WARM</td>
</tr>
<tr>
<td># NOT FOUND RECORDS FOUND</td>
<td>Number of cached not found records</td>
</tr>
<tr>
<td># NOT FOUND RECORDS ADDED</td>
<td>Number of cached not found records added</td>
</tr>
<tr>
<td># NOT FOUND RECORDS REMOVED</td>
<td>Number of cached not found records removed</td>
</tr>
</tbody>
</table>
### Audit report fields

This topic describes the fields in the most commonly used audit report, the DB2 Authorization Failures report (BAUDTAUT).

**Figure 101 on page 306** shows the DB2 Authorization Failures report (BAUDTAUT).

**Table 115 on page 306** describes the fields in the DB2 Authorizations Failures report.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTH</td>
<td>Authorization ID of the user accessing this DB2 system (QWHCAID)</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed (QWHCPLAN)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CORR</td>
<td>Correlation ID</td>
</tr>
</tbody>
</table>
| TIME         | Time of one of the following actions (QWACESC):  
- Authorization failure  
- GRANT or REVOKE operation  
- Audited DDL access  
- Audited DML access  
- BIND against an audited DB2 table  
- Authorization ID change  
- Utility access against a DB2 table  
- Audit record completed |
| OBJ TYPE     | DB2 object type, such as BUFFERPOOL, PLAN, or TABLESPACE (QW0140OB) or DB2 object type of the GRANT or REVOKE, such as BUFFERPOOL, PLAN, or TABLESPACE (QW0141OB) |
| AUTH CHECKED | Authorization ID that caused the failure (QW0140UR)                                                                                          |
| PRIVILEGE    | Operation (privilege) on which the failure occurred, such as SELECT, INSERT, BIND, ADD, or LOCK TABLE (QW0140PR)                                 |
| SOURCE       | Source DB2 table name or plan name involved in the authorization failure (QW0140SN)                                                            |
| TARGET       | Target DB2 table name or plan name involved in the authorization failure (QW0140TN)                                                            |
| ACEE UTOKEN  | ACEE utoken, if it is available (QW0140UT)                                                                                            |
| LENGTH OF FAILING SQL STATEMENT | Length of failing SQL statement (QW0140LL)                                                                                     |
| SQL          | Text of the failing SQL statement (QW0140TX)                                                                                             |

**Related Information**

- “Audit reports” on page 528

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**I/O activity report fields**

The topics in this section describe the most commonly used fields in the I/O activity reports.

**Note**

The field names may vary slightly due to formatting constraints in each report.
I/O summary details—active log

This topic describes the I/O summary detail active log report by DB2 and interval (BIOSUMLG).

Figure 102: I/O summary details—active log report

<table>
<thead>
<tr>
<th>LOCATION: DEEF</th>
<th>DATA FROM: 05/28/2013 14:11:38</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/S GROUP: DEEF</td>
<td>MBR:</td>
</tr>
<tr>
<td>SUBSYSTEM: DEEF</td>
<td>VER: 10.1</td>
</tr>
<tr>
<td>I/O SUMMARY DETAILS: ACTIVE LOG</td>
<td></td>
</tr>
<tr>
<td>TO: 05/30/2013 11:25:20</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTERVAL BEGIN - END</th>
<th>I/O REQ TOTAL AVG ELAPS</th>
<th>READ REQ TOTAL AVG ELAPS</th>
<th>WRITE REQUESTS: TOTAL AVG ELAPS</th>
<th>OTHER WAITS: ALLOCS AVG ELAPS</th>
<th>DEALLOCS AVG ELAPS</th>
<th>OPENS AVG ELAPS</th>
<th>CLOSES AVG ELAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 05/28 14:10 - 05/28 14:15</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>00.000941</td>
<td>N/P</td>
<td>00.000941</td>
<td>19.56</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>. ACTLG103</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. ACTLG203</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. *** INTERVAL TOTAL ***</td>
<td>90</td>
<td>0</td>
<td>90</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>00.001157</td>
<td>N/P</td>
<td>00.001157</td>
<td>19.56</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the I/O summary detail active log report.

Table 116: I/O summary detail active log report field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERVAL BEGIN - END DATASET</td>
<td>Database name</td>
</tr>
<tr>
<td>I/O REQ TOTAL AVG ELAPS</td>
<td>Average elapsed time for active log wait</td>
</tr>
<tr>
<td>READ REQ TOTAL AVG ELAPS</td>
<td>Average elapsed time for active log reads</td>
</tr>
<tr>
<td>WRITE REQUESTS:</td>
<td></td>
</tr>
<tr>
<td>TOTAL AVG ELAPS</td>
<td>Average elapsed time for active log writes</td>
</tr>
<tr>
<td>AV CONTIG CI/.WRITE</td>
<td>Average CIs/Write-IO for active log writes</td>
</tr>
<tr>
<td>OTHER WAITS:</td>
<td></td>
</tr>
<tr>
<td>ALLOCS AVG ELAPS</td>
<td>Average elapsed for active log waits (allocates)</td>
</tr>
<tr>
<td>DEALLOCS AVG ELAPS</td>
<td>Average elapsed for active log waits (deallocates)</td>
</tr>
<tr>
<td>OPENS AVG ELAPS</td>
<td>Average elapsed for active log waits (opens)</td>
</tr>
<tr>
<td>CLOSES AVG ELAPS</td>
<td>Average elapsed for active log waits (closes)</td>
</tr>
</tbody>
</table>
I/O summary details—archive log

This topic describes the I/O summary detail archive log report by DB2 and interval (BIOSUMAR).

Figure 103: I/O summary details—archive log report

<table>
<thead>
<tr>
<th>LOCATION: DEEF</th>
<th>SUBSYSTEM: DEEF</th>
<th>MBR:</th>
<th>VER: 10.1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I/O SUMMARY DETAILS: ARCHIVE LOG</td>
<td></td>
<td>TO: 05/29/2013 12:21:52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATASET INTERVAL</th>
<th>WAIT TYPE</th>
<th>TOTAL</th>
<th>AVERAGE ELAPSED</th>
<th>OTHER WAITS</th>
<th>TOTAL</th>
<th>AVERAGE ELAPSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 00006295</td>
<td>READ FROM DASD</td>
<td>0</td>
<td>N/P</td>
<td>ALLOCATE</td>
<td>1</td>
<td>00.286361</td>
</tr>
<tr>
<td>05/29 12:20 - 05/29 12:25</td>
<td>READ FROM TAPE</td>
<td>0</td>
<td>N/P</td>
<td>DEALLOCATE</td>
<td>1</td>
<td>00.207676</td>
</tr>
<tr>
<td></td>
<td>OFFLOADS</td>
<td>1</td>
<td>01.677667</td>
<td>OPEN</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
<td>OTHER</td>
<td>6</td>
<td>00.220538</td>
<td>CLOSE</td>
<td>2</td>
<td>00.143581</td>
</tr>
<tr>
<td></td>
<td>HSM RECALL</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BLOCKS/OFFLOAD</td>
<td>1439.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CATALOG LOCATE</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MULTI-DATASET TAPE</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TAPE VOL POSITIONING</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WTOR ISSUED</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA SET UNAVAILABLE</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHYSICAL UNIT UNAVAILABLE</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>READER SERVICE UNAVAILABLE</td>
<td>0</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the I/O summary details—archive log report.

Table 117: I/O summary details—archive log field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ FROM DASD</td>
<td>Average elapsed time for archive log read from DASD</td>
</tr>
<tr>
<td>READ FROM TAPE</td>
<td>Average elapsed time for archive log read from tape</td>
</tr>
<tr>
<td>OFFLOADS</td>
<td>Average elapsed time for archive log writes</td>
</tr>
<tr>
<td>OTHER</td>
<td>Average elapsed time for archive log waits (other)</td>
</tr>
<tr>
<td>BLOCKS/OFFLOAD</td>
<td>Average blocks per write for the archive log</td>
</tr>
<tr>
<td>ALLOCATE</td>
<td>Number of times allocate waited</td>
</tr>
<tr>
<td>DEALLOCATE</td>
<td>Number of time deallocate waited</td>
</tr>
<tr>
<td>OPEN</td>
<td>Number of time opens waited</td>
</tr>
<tr>
<td>CLOSE</td>
<td>Number of time close waited</td>
</tr>
<tr>
<td>HSM RECALL</td>
<td>Number of time HSM Recall waited</td>
</tr>
<tr>
<td>CATALOG LOCATE</td>
<td>Number of time catalog waited</td>
</tr>
<tr>
<td>MULTI-DATASET TAPE</td>
<td>Number of time multi-dataset tape allocation waited</td>
</tr>
<tr>
<td>TAPE VOL POSITIONING</td>
<td>Number of time waited for tape volume positioning</td>
</tr>
<tr>
<td>WTOR ISSUED</td>
<td>Number of time waited for WTOR</td>
</tr>
<tr>
<td>DATA SET UNAVAILABLE</td>
<td>Number of time waited because a dataset was unavailable</td>
</tr>
<tr>
<td>PHYSICAL UNIT UNAVAILABLE</td>
<td>Number of time waited because a physical unit was unavailable</td>
</tr>
</tbody>
</table>
### I/O summary details—bootstrap dataset

This topic describes the I/O summary detail bootstrap dataset report (BIOSUMBS).

**Figure 104: I/O summary details—bootstrap dataset report**

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Interval</th>
<th>Wait Type</th>
<th>Total</th>
<th>Elapsed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBS0001</td>
<td>05/28 14:10 - 05/28 14:15</td>
<td>READ REQUESTS</td>
<td>1</td>
<td>00.000780</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WRITE REQUESTS</td>
<td>1</td>
<td>00.000362</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL WAITS</td>
<td>2</td>
<td>00.000571</td>
</tr>
</tbody>
</table>

**Table 69 on page 217** describes the fields in the I/O summary details—bootstrap dataset report.

**Table 118: I/O summary details—bootstrap dataset field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>Total number of read requests</td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>Average elapsed for BSDS reads</td>
</tr>
<tr>
<td>WRITE REQUESTS</td>
<td>Total number of write requests</td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>Average elapsed for BSDS writes</td>
</tr>
<tr>
<td>TOTAL WAITS</td>
<td>Total number of BSDS waits</td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>Average elapsed for BSDS waits</td>
</tr>
</tbody>
</table>

### I/O summary details—buffer pool

This topic describes the I/O summary detail buffer pool report by DB2 and interval (BIOSUMB).

**Figure 105: I/O summary details—buffer pool report**

<table>
<thead>
<tr>
<th>Plan Name</th>
<th>INTERVAL BEGIN - END</th>
<th>TOTAL ELAPSED</th>
<th>TOTAL TYPE</th>
<th>Elapsed %</th>
<th>W/O PRIME AUTHID</th>
<th>AVERAGE ELAPSED</th>
<th>TOTAL TYPE</th>
<th>W/O PRIME AUTHID</th>
<th>Elapsed %</th>
<th>CAST</th>
<th>AVERAGE ELAPSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/28 14:00 - 05/28 14:05</td>
<td>3 00.010170</td>
<td>3 SYNCH</td>
<td>80.010170</td>
<td>100.00</td>
<td>1.00</td>
<td>0.08</td>
<td>0 SYNCH</td>
<td>80.00</td>
<td>100.00</td>
<td>1.00</td>
<td>0.08</td>
</tr>
<tr>
<td>05/28 14:00 - 05/28 14:05</td>
<td>0 SEQPF</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>05/28 14:00 - 05/28 14:05</td>
<td>0 DYNPF</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>05/28 14:00 - 05/28 14:05</td>
<td>0 LSTPF</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
</tbody>
</table>

I/O activity report fields
Table 69 on page 217 describes the fields in the I/O summary detail buffer pool report.

Table 119: I/O summary detail buffer pool report field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IO REQUESTS:</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of threads for this authid/plan combination</td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>Average elapsed time for these threads</td>
</tr>
<tr>
<td>READ REQUESTS:</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of read requests for these threads</td>
</tr>
<tr>
<td>TYPE</td>
<td>One of the four listed types</td>
</tr>
<tr>
<td>WITH IO:</td>
<td></td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>Average elapsed time for sync reads</td>
</tr>
<tr>
<td>%</td>
<td>Percent of I/O needed for sync reads</td>
</tr>
<tr>
<td>W/O OUT IO:</td>
<td>Pages per read without I/O</td>
</tr>
<tr>
<td>%</td>
<td>Percent of sync reads that avoided I/O</td>
</tr>
<tr>
<td>WRITE REQUESTS:</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total elapsed time for normal write</td>
</tr>
<tr>
<td>TYPE</td>
<td>Synchronous or Asynchronous</td>
</tr>
<tr>
<td>CAST OUT</td>
<td>Yes or no</td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>Average elapsed time for sync write (normal)</td>
</tr>
<tr>
<td>PAGES/WRITE</td>
<td>Pages per write for sync write (normal)</td>
</tr>
</tbody>
</table>

I/O summary details—cross invalidation activity

This topic describes the I/O summary detail cross invalidation activity report by DB2 and interval (BIOSUMXI).

Figure 106: I/O summary details—cross invalidation activity
Table 69 on page 217 describes the fields in the I/O summary details—cross invalidation activity report.

Table 120: I/O summary details—cross invalidation activity field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGE:</td>
<td></td>
</tr>
<tr>
<td>DBID</td>
<td>Database descriptor ID</td>
</tr>
<tr>
<td>OBID</td>
<td>Object descriptor ID</td>
</tr>
<tr>
<td>PIECE#</td>
<td>Pageset piece number</td>
</tr>
<tr>
<td>PAGE# (HEX)</td>
<td>Relative page number</td>
</tr>
<tr>
<td>BPID</td>
<td>Buffer pool ID</td>
</tr>
<tr>
<td></td>
<td>SYNCHRONOUS READS:</td>
</tr>
<tr>
<td>GBPOOL</td>
<td>Count of synchronous read group buffer pool hits</td>
</tr>
<tr>
<td>DASD</td>
<td>Count of synchronous read DASD I/O</td>
</tr>
<tr>
<td></td>
<td>SEQUENTIAL PREFETCHES:</td>
</tr>
<tr>
<td>GBPOOL</td>
<td>Count of asynchronous read group buffer pool hits</td>
</tr>
<tr>
<td>DASD</td>
<td>Count of asynchronous read DASD I/Os</td>
</tr>
</tbody>
</table>

I/O activity summary—active log

This topic describes the active log section of the I/O summary report by DB2 (BIOSUM).

Figure 107: I/O activity summary—active log report

<table>
<thead>
<tr>
<th>ACTIVE LOG</th>
<th>TOTALS</th>
<th>AVERAGE</th>
<th>ELAPSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL WAITS</td>
<td>4343</td>
<td>00.000971</td>
<td></td>
</tr>
<tr>
<td>READ REQUESTS</td>
<td>139</td>
<td>00.003126</td>
<td></td>
</tr>
<tr>
<td>WRITE REQUESTS</td>
<td>4204</td>
<td>00.000900</td>
<td></td>
</tr>
<tr>
<td>CONTIG. CI/WRITE</td>
<td>6.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER WAITS</td>
<td>0</td>
<td>N/P</td>
<td></td>
</tr>
<tr>
<td>ALLOCATE</td>
<td>0</td>
<td>N/P</td>
<td></td>
</tr>
<tr>
<td>DEALLOCATE</td>
<td>0</td>
<td>N/P</td>
<td></td>
</tr>
<tr>
<td>OPEN</td>
<td>0</td>
<td>N/P</td>
<td></td>
</tr>
<tr>
<td>CLOSE</td>
<td>0</td>
<td>N/P</td>
<td></td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the active log section of the I/O summary report by DB2.

### Table 121: I/O activity summary—active log field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL WAITS</td>
<td>Average elapsed time for active log wait</td>
</tr>
<tr>
<td>READ REQUESTS</td>
<td>Average elapsed time for active load read</td>
</tr>
<tr>
<td>WRITE REQUESTS</td>
<td>Average elapsed time for active log writes</td>
</tr>
<tr>
<td>CONTIG. CI/WRITE</td>
<td>Average CIs/Write-IO for active log writes</td>
</tr>
<tr>
<td>OTHER WAITS</td>
<td>Average elapsed time for active log, other wait</td>
</tr>
<tr>
<td>ALLOCATE</td>
<td>Average elapsed time for active log wait (allocate)</td>
</tr>
<tr>
<td>DEALLOCATE</td>
<td>Average elapsed time for active log wait (deallocate)</td>
</tr>
<tr>
<td>OPEN</td>
<td>Average elapsed time for active log wait (open)</td>
</tr>
<tr>
<td>CLOSE</td>
<td>Average elapsed time for active log wait (close)</td>
</tr>
</tbody>
</table>

### I/O activity summary—archive log

This topic describes the archive log section of the I/O summary report by DB2 (BIOSUM).

#### Figure 108: I/O activity summary—archive log report

<table>
<thead>
<tr>
<th>ARCHIVE_LOG</th>
<th>TOTALS</th>
<th>AVERAGE ELAPSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ REQUESTS</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>DASD READS</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>TAPE READS</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>OFFLOAD REQUESTS</td>
<td>1</td>
<td>01.677667</td>
</tr>
<tr>
<td>BLOCKS/OFFLOAD</td>
<td>1439.00</td>
<td></td>
</tr>
<tr>
<td>OTHER WAITS</td>
<td>6</td>
<td>00.220538</td>
</tr>
<tr>
<td>ALLOCATE</td>
<td>1</td>
<td>00.286361</td>
</tr>
<tr>
<td>DEALLOCATE</td>
<td>1</td>
<td>00.207676</td>
</tr>
<tr>
<td>OPEN</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td>CLOSE</td>
<td>2</td>
<td>00.143581</td>
</tr>
<tr>
<td>HSM RECALL</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>CATALOG LOCATE</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>MULTI-DATASET TAPE</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>TAPE VOL POSITIONING</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>WTOR ISSUED</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>DATA SET UNAVAILABLE</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>PHYSICAL UNIT UNAV.</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>READER SERVICE UNAV.</td>
<td>0</td>
<td>N/P</td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the archive log section of the I/O summary report by DB2.

Table 122: I/O activity summary—archive log field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ REQUESTS</td>
<td>Average elapsed time for archive load reads</td>
</tr>
<tr>
<td>DASD READS</td>
<td>Average elapsed time for archive load</td>
</tr>
<tr>
<td>DASD TAPE READS</td>
<td>Average elapsed time for archive log tape reads</td>
</tr>
<tr>
<td>OFFLOAD REQUESTS</td>
<td>Average elapsed time for archive log writes</td>
</tr>
<tr>
<td>BLOCKS/OFFLOAD</td>
<td>Average blocks per write for the archive log</td>
</tr>
<tr>
<td>OTHER WAITS</td>
<td>Average elapsed time for archive logs, other wait</td>
</tr>
<tr>
<td>ALLOCATE</td>
<td>Average elapsed time for archive logs, wait on alloc</td>
</tr>
<tr>
<td>DEALLOCATE</td>
<td>Average elapsed time for archive logs wait on deallocate</td>
</tr>
<tr>
<td>OPEN</td>
<td>Average elapsed time for archive logs, wait on open</td>
</tr>
<tr>
<td>CLOSE</td>
<td>Average elapsed time for archive logs, wait on close</td>
</tr>
<tr>
<td>HSM RECALL</td>
<td>Average elapsed time for archive logs, wait on HSM recall</td>
</tr>
<tr>
<td>CATALOG LOCATE</td>
<td>Average elapsed time for archive log wait on catalog locate</td>
</tr>
<tr>
<td>MULTI-DATASET TAPE</td>
<td>Average elapsed archive for log wait on multi-dataset tape</td>
</tr>
<tr>
<td>TAPE VOL POSITIONING</td>
<td>Average elapsed archive log wait for tape volume positioning</td>
</tr>
<tr>
<td>WTOR ISSUED</td>
<td>Average elapsed archive log wait on WTOR</td>
</tr>
<tr>
<td>DATA SET UNAVAILABLE</td>
<td>Average elapsed archive log wait on data set unavailable</td>
</tr>
<tr>
<td>PHYSICAL UNIT UNAV</td>
<td>Average elapsed archive log wait on physical unit unavailable</td>
</tr>
<tr>
<td>READER SERVICE UNAV</td>
<td>Average elapsed for archive log wait, reader service unavailable.</td>
</tr>
</tbody>
</table>

I/O activity summary—buffer pool

This topic describes the buffer pool section of the I/O summary report by DB2 (BIOSUM).

Figure 109: I/O activity summary—buffer pool report

<table>
<thead>
<tr>
<th>BUFFER POOL</th>
<th>TOTALS</th>
<th>AVERAGE ELAPSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL I/O REQUESTS</td>
<td>178489</td>
<td>00.000621</td>
</tr>
<tr>
<td>TOTAL READ I/O REQUESTS</td>
<td>172661</td>
<td>00.000596</td>
</tr>
<tr>
<td>NON-PREFETCH (SYNC) READS</td>
<td>56219</td>
<td></td>
</tr>
<tr>
<td>PREFETCH READS (ASYNC)</td>
<td>116442</td>
<td></td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the buffer pool section of the I/O summary report by DB2.

Table 123: I/O activity summary—buffer pool field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL I/O REQUESTS</td>
<td>Total I/O requests</td>
</tr>
<tr>
<td>TOTAL READ I/O REQUESTS</td>
<td>Count of read types (seq/list/dyn/s-rio)</td>
</tr>
<tr>
<td>NON-PREFETCH (SYNC) READS</td>
<td>Count of read type (synchronous)</td>
</tr>
<tr>
<td>PREFETCH READS (ASYNC)</td>
<td>Count of read type (asynchronous)</td>
</tr>
<tr>
<td>WITHOUT I/O (BP HITS)</td>
<td>Count of reads without I/O (buffer pool hits)</td>
</tr>
<tr>
<td>WITH I/O</td>
<td>Completed asynchronous read I/Os</td>
</tr>
<tr>
<td>PAGES READ</td>
<td>Asynchronous I/O pages read</td>
</tr>
<tr>
<td>PAGES READ/IO</td>
<td>Pages read per asynchronous I/O</td>
</tr>
<tr>
<td>TOTAL WRITE REQUESTS</td>
<td>Total write I/O requests</td>
</tr>
<tr>
<td>SYNCHRONOUS WRITES</td>
<td>Count of the number of pages written</td>
</tr>
<tr>
<td>COUPLING FACILITY CASTOUTS</td>
<td>Count of coupling facility castouts</td>
</tr>
<tr>
<td>PAGES WRITTEN PER WRITE IO</td>
<td>Pages per synchronous write I/O</td>
</tr>
<tr>
<td>ASYNCHRONOUS WRITES</td>
<td>Number of pages to write</td>
</tr>
<tr>
<td>COUPLING FACILITY CASTOUTS</td>
<td>Count of coupling facility castouts for write</td>
</tr>
<tr>
<td>PAGES WRITTEN PER WRITE IO</td>
<td>Pages per asynchronous write I/O</td>
</tr>
</tbody>
</table>
I/O activity summary—cross invalidation activity

This topic describes the cross invalidation activity section of the I/O summary report by DB2 (BIOSUM).

Figure 110: I/O activity summary—cross invalidation activity report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNCHRONOUS READS</td>
<td>Number of synchronous reads</td>
</tr>
<tr>
<td>REFRESHED FROM GRPBPOOL</td>
<td>Number of synchronous reads refreshed from group buffer pools</td>
</tr>
<tr>
<td>REFRESHED FROM DASD</td>
<td>Number of synchronous reads refreshed from dasd</td>
</tr>
<tr>
<td>SEQUENTIAL PREFETCHES</td>
<td>Number of sequential prefetches</td>
</tr>
<tr>
<td>REFRESHED FROM GRPBPOOL</td>
<td>Number of sequential prefetches refreshed from group buffer pools</td>
</tr>
<tr>
<td>REFRESHED FROM DASD</td>
<td>Number of sequential prefetches refreshed from dasd</td>
</tr>
</tbody>
</table>

Table 124 on page 217 describes the fields in the cross invalidation activity section of the I/O summary report by DB2.

I/O activity summary—EDM pool

This topic describes the EDM pool section of the I/O summary report by DB2 (BIOSUM).

Figure 111: I/O activity summary—EDM pool report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT/PT/DBD LOADS</td>
<td>CT/PT/DBD LOADS</td>
</tr>
<tr>
<td>REFERENCES IN POOL</td>
<td>REFERENCES IN POOL</td>
</tr>
<tr>
<td>AVERAGE ELAPSED</td>
<td>AVERAGE ELAPSED</td>
</tr>
<tr>
<td>AVG LEN (BYTES)</td>
<td>AVG LEN (BYTES)</td>
</tr>
<tr>
<td>CURSOR TABLE - HEADER</td>
<td>N/P</td>
</tr>
<tr>
<td>CURSOR TABLE - DIRECTORY</td>
<td>N/P</td>
</tr>
<tr>
<td>CURSOR TABLE - RDS SECTION</td>
<td>N/P</td>
</tr>
<tr>
<td>TOTAL PLANS</td>
<td>0</td>
</tr>
<tr>
<td>PACKAGE TABLE - HEADER</td>
<td>N/P</td>
</tr>
<tr>
<td>PACKAGE TABLE - DIRECTORY</td>
<td>N/P</td>
</tr>
<tr>
<td>PACKAGE TABLE - RDS SECTION</td>
<td>N/P</td>
</tr>
<tr>
<td>TOTAL PACKAGES</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the EDM pool section of the I/O summary report by DB2.

Table 125: I/O activity summary—EDM pool field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>CT/PT/DBD REFERENCES</th>
<th>LOADS NOT IN POOL</th>
<th>AVERAGE ELAPSED</th>
<th>AVG LEN (BYTES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURSOR TABLE-HEADER</td>
<td>Number of calls to the cursor table header</td>
<td></td>
<td></td>
<td>Average elapsed for the cursor table header</td>
<td>Cursor table average length</td>
</tr>
<tr>
<td>CURSOR TABLE-DIRECTORY</td>
<td>Number of calls to the cursor table directory</td>
<td></td>
<td></td>
<td>Average elapsed for the cursor table directory</td>
<td>Cursor table directory average length</td>
</tr>
<tr>
<td>CURSOR TABLE- RDS SECTION</td>
<td>Number of calls to the cursor RDS section</td>
<td></td>
<td>Number of calls to the Data Manager (RDS section)</td>
<td>Average elapsed for the cursor table RDS section</td>
<td>Cursor table RDS section average length</td>
</tr>
<tr>
<td>TOTAL PLANS</td>
<td>Total plan loads</td>
<td>Total plan calls</td>
<td></td>
<td>Average elapsed for the plan</td>
<td>Plan average length</td>
</tr>
<tr>
<td>PACKAGE TABLE-HEADER</td>
<td>Number of calls to the package table header</td>
<td></td>
<td>Length of section for get req</td>
<td>Average elapsed for the package header</td>
<td>Package table header average length</td>
</tr>
<tr>
<td>PACKAGE TABLE-DIRECTORY</td>
<td>Number of calls to the package table directory</td>
<td></td>
<td>Length of package section for get req</td>
<td>Average elapsed for the package table directory</td>
<td>Package table directory average length</td>
</tr>
<tr>
<td>PACKAGE TABLE- RDS SECTION</td>
<td>Number of calls to the cursor package table rds section</td>
<td></td>
<td>Length of section for get req</td>
<td>Average elapsed for the package table RDS section</td>
<td>Package table RDS section average length</td>
</tr>
<tr>
<td>TOTAL PACKAGES</td>
<td>Total Package Loads</td>
<td>Package total calls</td>
<td></td>
<td>Average elapsed for the package</td>
<td>Package average length</td>
</tr>
<tr>
<td>DATABASE DESCRIPTORS</td>
<td>Number of calls to the DBD</td>
<td>Number of calls to Data Manager</td>
<td></td>
<td>Average elapsed for the Database descriptors</td>
<td>Database descriptors average length</td>
</tr>
</tbody>
</table>

I/O activity summary—bootstrap dataset

This topic describes the bootstrap dataset section of the I/O summary report by DB2 (BIOSUM).

Figure 112: I/O activity summary—bootstrap dataset report
Table 69 on page 217 describes the fields in the bootstrap dataset section of the I/O summary report by DB2.

Table 126: I/O activity summary—bootstrap dataset field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL WAITS</td>
<td>Average wait elapsed on BSDS</td>
</tr>
<tr>
<td>READ REQUESTS</td>
<td>Average elapsed on BSDS reads</td>
</tr>
<tr>
<td>WRITE REQUESTS</td>
<td>Average elapsed on BSDS writes</td>
</tr>
</tbody>
</table>

Locking activity report fields

The topics in this section describe the most commonly used fields in the locking reports.

Note

The field name may vary slightly due to formatting constraints in each report.

Related Information

• "Locking activity reports" on page 542

Lock summary—detail

This topic describes the Lock summary detail report (BLKSUMDT).

Figure 113: Lock summary—detail report
Table 69 on page 217 describes the fields in the Lock summary—detail report.

### Table 127: Lock summary—detail report field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TYPE</strong></td>
<td>Possible types are:</td>
</tr>
<tr>
<td></td>
<td>- DATA PAGE</td>
</tr>
<tr>
<td></td>
<td>- PAGESET</td>
</tr>
<tr>
<td></td>
<td>- TABLE</td>
</tr>
<tr>
<td></td>
<td>- MASS DELETE</td>
</tr>
<tr>
<td></td>
<td>- DATA BASE</td>
</tr>
<tr>
<td></td>
<td>- ROW LOCK</td>
</tr>
<tr>
<td></td>
<td>- SKEL C/</td>
</tr>
<tr>
<td></td>
<td>- (S) X34</td>
</tr>
<tr>
<td></td>
<td>- PAGE P-LOCK</td>
</tr>
<tr>
<td><strong>NAME</strong></td>
<td>Name of locked resource</td>
</tr>
<tr>
<td><strong>TOTAL REQUESTS</strong></td>
<td>Total lock requests</td>
</tr>
<tr>
<td><strong>LOCAL/XES</strong></td>
<td>Locked resource name LOCKED/XES</td>
</tr>
<tr>
<td><strong>REQ TYPE</strong></td>
<td>Count of IRLM FUNCTION CODE for:</td>
</tr>
<tr>
<td></td>
<td>- LOCK</td>
</tr>
<tr>
<td></td>
<td>- CHANGE</td>
</tr>
<tr>
<td></td>
<td>- UNLOCK</td>
</tr>
<tr>
<td></td>
<td>- OTHER</td>
</tr>
<tr>
<td><strong>LOCK STATE</strong></td>
<td>Lock state</td>
</tr>
<tr>
<td></td>
<td>- S - count of shared locks</td>
</tr>
<tr>
<td></td>
<td>- IX - count of Intent for exclusive locks</td>
</tr>
<tr>
<td></td>
<td>- X - count of exclusive locks</td>
</tr>
<tr>
<td></td>
<td>- SIX - count of SHARED WITH INTENT EXCLUSIVE</td>
</tr>
<tr>
<td></td>
<td>- U - count of Exclusive locks</td>
</tr>
<tr>
<td></td>
<td>- NSU - count of NONSHARED UPDATE locks</td>
</tr>
</tbody>
</table>
### Lock summary-lockouts

This topic describes the Lock summary lockout report (BLKSUMLO).

**Figure 114: Lock summary—lockout report**

<table>
<thead>
<tr>
<th>LOCATION: DGR</th>
<th>DATA FROM: 08/21/2013 13:44:57</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/S GRP: DSNDGR</td>
<td>TO: 08/22/2013 11:27:17</td>
</tr>
<tr>
<td>MBR: DGR1</td>
<td>PLAN NAME DSNTEP2</td>
</tr>
<tr>
<td>SSID: DGR1</td>
<td>VER: 10.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE</th>
<th>NAME</th>
<th>TIMEOUTS</th>
<th>DEADLOCKS</th>
<th>MEMBER</th>
<th>PLAN</th>
<th>CONNECT</th>
<th>CORRID</th>
<th>BLOCKER/</th>
<th>HOLDER</th>
<th>WAITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>C/S DRAIN</td>
<td>DEADDB01.DEADTS01.CSDR.0000000000</td>
<td>0</td>
<td>3</td>
<td>DGR1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROW LOCK</td>
<td>DSNDB06 .0362 .RLCK.00000A400</td>
<td>0</td>
<td>3</td>
<td>DGR1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the Lock summary—lockout report.

**Table 128: Lock summary—lockout field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>Possible types are:</td>
</tr>
<tr>
<td></td>
<td>■ C/S DRAIN</td>
</tr>
<tr>
<td></td>
<td>■ ROW LOCK</td>
</tr>
<tr>
<td>NAME</td>
<td>Locked resource name</td>
</tr>
<tr>
<td>TIMEOUTS</td>
<td>Count of timeouts caused by locked resources</td>
</tr>
<tr>
<td>DEADLOCKS</td>
<td>Count of deadlocks caused by locked resources</td>
</tr>
</tbody>
</table>

**AGENTS:**

| MEMBER | Data sharing member name |
| PLAN   | Other plan name |
| CONNECT| Other connection ID |
This topic describes the Lock summary suspensions report (BLKSUMSU).

Table 69 on page 217 describes the fields in the Lock summary—suspensions report.

Table 129: Lock summary—suspensions field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>Possible types are:</td>
</tr>
<tr>
<td></td>
<td>▪ NOTIFY</td>
</tr>
<tr>
<td></td>
<td>▪ (S) X2F</td>
</tr>
<tr>
<td></td>
<td>▪ SYSLGRNG REC</td>
</tr>
<tr>
<td></td>
<td>▪ INDEX EDF</td>
</tr>
<tr>
<td></td>
<td>▪ LOB LOCK</td>
</tr>
<tr>
<td>NAME</td>
<td>Lock type/resource ID</td>
</tr>
<tr>
<td>TOTAL SUSPENDS</td>
<td>Total suspends</td>
</tr>
<tr>
<td>SUSPEND REASONS:</td>
<td></td>
</tr>
<tr>
<td>LOCAL LATCH</td>
<td>Latch cont suspends</td>
</tr>
<tr>
<td>GLOBAL IRLMQ</td>
<td>IRLMQ cont suspends</td>
</tr>
<tr>
<td>NOTIFY OTHER</td>
<td>Other suspends</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>RESUME REASONS:</td>
<td></td>
</tr>
<tr>
<td>NORMAL:</td>
<td></td>
</tr>
<tr>
<td>NMBR</td>
<td>Number of normal resumes</td>
</tr>
<tr>
<td>AVG ELAPSED</td>
<td>Average elapsed time for normal resumes</td>
</tr>
<tr>
<td>TIMEOUT/CANCEL:</td>
<td></td>
</tr>
<tr>
<td>NMBR</td>
<td>Number of timeout resumes</td>
</tr>
<tr>
<td>AVG ELAPSED</td>
<td>Average elapsed time for timeouts</td>
</tr>
<tr>
<td>DEADLOCK:</td>
<td></td>
</tr>
<tr>
<td>NMBR</td>
<td>Number of deadlock resumes</td>
</tr>
<tr>
<td>AVG ELAPSED</td>
<td>Average number of deadlock resumes</td>
</tr>
</tbody>
</table>

**Lock trace—detail**

This topic describes the holder/blocker details section of the Lock trace event detail report (BLKTRCDT).

**Figure 116: Lock trace—detail report**

<table>
<thead>
<tr>
<th>Event Time</th>
<th>Event</th>
<th>Lock Type</th>
<th>Lock Resource Name</th>
<th>Event Specific Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 08/19/13 11:39:38.77317700</td>
<td>LOCK</td>
<td>SYSLGRNG REC</td>
<td>DSNB06 .SYSTSSSTG.LGRN.0000008100</td>
<td>LOCK STATE: X</td>
</tr>
</tbody>
</table>

**Table 69 on page 217** describes the fields in the Lock trace event detail report.

**Table 130: Lock trace—detail report field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK STATE</td>
<td>Lock state</td>
</tr>
<tr>
<td>DURATION</td>
<td>Lock duration</td>
</tr>
<tr>
<td>PARENT TK</td>
<td>Parent lock token</td>
</tr>
<tr>
<td>LOCK HASH</td>
<td>Locked resource hash value</td>
</tr>
<tr>
<td>SUSPNDRSN</td>
<td>Lock suspend reason</td>
</tr>
</tbody>
</table>
Lock trace—holder/blocker details

This topic describes the holder/blocker details section of the Lock trace lockout report (BLKTRCLO).

**Figure 117: Lock trace—holder/blocker details report**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOCKER IS</td>
<td>Blocker holder/waiter flag</td>
</tr>
<tr>
<td>LOCK STATE</td>
<td>Lock holders state</td>
</tr>
<tr>
<td>LUWID</td>
<td>Lock holders network ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Lock holders plan name</td>
</tr>
<tr>
<td>CONN</td>
<td>Lock holders connection ID</td>
</tr>
<tr>
<td>THDTK</td>
<td>Blocker thread token</td>
</tr>
<tr>
<td>WKUNT</td>
<td>Lock holders owning work unit</td>
</tr>
<tr>
<td>EUID</td>
<td>Holders end user userid</td>
</tr>
<tr>
<td>WSNAM</td>
<td>Holders workstation name</td>
</tr>
<tr>
<td>TXNAM</td>
<td>Holders transaction name</td>
</tr>
<tr>
<td>PROGM</td>
<td>Holder program name</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the holder/blocker details section of the Lock trace lockout report.

**Table 131: Lock trace—holder/blocker details field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESUMERSN</td>
<td>Reason lock resumed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOCKER IS</td>
<td>Blocker holder/waiter flag</td>
</tr>
<tr>
<td>LOCK STATE</td>
<td>Lock holders state</td>
</tr>
<tr>
<td>LUWID</td>
<td>Lock holders network ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Lock holders plan name</td>
</tr>
<tr>
<td>CONN</td>
<td>Lock holders connection ID</td>
</tr>
<tr>
<td>THDTK</td>
<td>Blocker thread token</td>
</tr>
<tr>
<td>WKUNT</td>
<td>Lock holders owning work unit</td>
</tr>
<tr>
<td>EUID</td>
<td>Holders end user userid</td>
</tr>
<tr>
<td>WSNAM</td>
<td>Holders workstation name</td>
</tr>
<tr>
<td>TXNAM</td>
<td>Holders transaction name</td>
</tr>
<tr>
<td>PROGM</td>
<td>Holder program name</td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the Lock trace—suspensions.

Table 132: Lock trace—suspensions field definitions
This topic describes the victim thread identification section of the Lock trace lockout report (BLKTRCLO).

Figure 119: Lock trace—victim thread identification report

Table 69 on page 217 describes the fields in the victim thread identification section of the Lock trace lockout report.

Table 133: Lock trace—victim thread identification field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUWID</td>
<td>Logical unit of work ID</td>
</tr>
<tr>
<td>PRIMAUTH</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>ORIGAUTH</td>
<td>Original operator/logon ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name</td>
</tr>
<tr>
<td>CONNECT</td>
<td>Connection ID</td>
</tr>
<tr>
<td>CONTYP</td>
<td>Connection type</td>
</tr>
<tr>
<td>CORRID</td>
<td>Correlation ID</td>
</tr>
</tbody>
</table>
This topic describes the waiter details section of the Lock trace lockout report (BLKTRCLO).

**Figure 120: Lock trace—waiter details report**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORTH</td>
<td>Lock waiters worth value</td>
</tr>
<tr>
<td>LOCK STATE</td>
<td>Lock waiters requested state</td>
</tr>
<tr>
<td>LUWID</td>
<td>Lock waiters network ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Lock waiters plan name</td>
</tr>
<tr>
<td>CONN</td>
<td>Lock waiters connection ID</td>
</tr>
<tr>
<td>THD TK</td>
<td>Waiter thread token</td>
</tr>
<tr>
<td>WKUNT</td>
<td>Lock waiters owning WK unit</td>
</tr>
<tr>
<td>EUID</td>
<td>Waiters end user userid</td>
</tr>
<tr>
<td>WSNAME</td>
<td>Waiters workstation name</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the waiter details section of the Lock trace lockout report.

**Table 134: Lock trace—waiter details field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDUSER</td>
<td>End user ID</td>
</tr>
<tr>
<td>WSNAME</td>
<td>Work station name</td>
</tr>
<tr>
<td>TRXNAME</td>
<td>Transaction name</td>
</tr>
</tbody>
</table>

Table 134: Lock trace—waiter details field definitions
DB2 timeouts—causing agent

This topic describes the causing agent section of the DB2 timeout report (BTIMEOUT).

Figure 121: DB2 timeouts—causing agent report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONFLICT TYPE</td>
<td>Possible values are:</td>
</tr>
<tr>
<td>STATE</td>
<td>Lock holder</td>
</tr>
<tr>
<td>AUTHID</td>
<td>Waiter</td>
</tr>
<tr>
<td>DS MEMBER</td>
<td>Retained lock type</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the causing agent section of the DB2 timeouts report.

Table 135: DB2 timeouts—causing agent field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONFLICT TYPE</td>
<td>Possible values are:</td>
</tr>
<tr>
<td>STATE</td>
<td>Lock holders state</td>
</tr>
<tr>
<td>AUTHID</td>
<td>Lock holders authorization ID</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECTID</td>
<td>Lock holders connection ID</td>
</tr>
<tr>
<td>DS MEMBER</td>
<td>DB2 member name</td>
</tr>
<tr>
<td>DURATION</td>
<td>Lock holders duration</td>
</tr>
<tr>
<td>CORRID</td>
<td>Lock holders correlation ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Lock holders plan name</td>
</tr>
<tr>
<td>THD TOKEN</td>
<td>Thread token</td>
</tr>
<tr>
<td>STMT ID</td>
<td>Holders cached statement ID</td>
</tr>
<tr>
<td>WORK UNIT</td>
<td>Lock holders owning work unit</td>
</tr>
<tr>
<td>END USER ID</td>
<td>Holders end user userid</td>
</tr>
<tr>
<td>EU TRAN</td>
<td>Holders transaction name</td>
</tr>
<tr>
<td>EU WRK STA</td>
<td>Holders workstation name</td>
</tr>
<tr>
<td>LUWID</td>
<td>Other LUWID</td>
</tr>
</tbody>
</table>

### DB2 timeouts—victim

This topic describes the victim section of the DB2 timeout report (BTIMEOUT).

#### Figure 122: DB2 timeouts—victim report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>Lock waiter requested state</td>
</tr>
<tr>
<td>FUNC</td>
<td>Lock waiter requested function</td>
</tr>
<tr>
<td>AUTHID</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>CONNECTID</td>
<td>Connection ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>Connection type</td>
</tr>
<tr>
<td>DS MEMBER</td>
<td>DB2 member name</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the victim section of the DB2 timeouts report.

Table 136: DB2 timeouts—victim field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>Lock waiter requested state</td>
</tr>
<tr>
<td>FUNC</td>
<td>Lock waiter requested function</td>
</tr>
<tr>
<td>AUTHID</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>CONNECTID</td>
<td>Connection ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>Connection type</td>
</tr>
<tr>
<td>DS MEMBER</td>
<td>DB2 member name</td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the holder section of the DB2 deadlocks report.
Table 137: DB2 deadlocks—holder field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>Lock waiters state</td>
</tr>
<tr>
<td>DURATION</td>
<td>Lock holders state</td>
</tr>
<tr>
<td>AUTHID</td>
<td>Holders authorization ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Lock holders plan name</td>
</tr>
<tr>
<td>CONNECT</td>
<td>Lock holders connection ID</td>
</tr>
<tr>
<td>CORRID</td>
<td>Lock holders correlation ID</td>
</tr>
<tr>
<td>LUWID</td>
<td>Lock holders network ID</td>
</tr>
<tr>
<td>THREAD TOKEN</td>
<td>Blocker thread token</td>
</tr>
<tr>
<td>OWNING THREAD UNIT</td>
<td>Lock holders owning work unit</td>
</tr>
<tr>
<td>DB2 MEMBER</td>
<td>Lock holders DBMS ID</td>
</tr>
<tr>
<td>END USER ID</td>
<td>Holders end user userID</td>
</tr>
<tr>
<td>WORK STATION</td>
<td>Holders workstation name</td>
</tr>
<tr>
<td>TRANSACTION</td>
<td>Holders transaction name</td>
</tr>
<tr>
<td>PROGRAM NAME</td>
<td>Holder program name</td>
</tr>
<tr>
<td>COLLECTION ID</td>
<td>Holder collection ID</td>
</tr>
<tr>
<td>LOCATION NAME</td>
<td>Holder location name</td>
</tr>
<tr>
<td>CONSIS TOKEN</td>
<td>Holder consistency token</td>
</tr>
<tr>
<td>RESOURCE</td>
<td>Lock type/resource ID</td>
</tr>
<tr>
<td>DB/PS</td>
<td>Locked resource DBID</td>
</tr>
<tr>
<td>PAGE</td>
<td>Locked resource ID 1</td>
</tr>
<tr>
<td>TYPE</td>
<td>Locked resource type</td>
</tr>
<tr>
<td>HASH</td>
<td>Locked resource hash value</td>
</tr>
</tbody>
</table>

DB2 deadlocks—waiter

This topic describes the waiter section of the DB2 deadlocks report (BDEADLCK).

Figure 124: DB2 deadlocks—waiter report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>IX</td>
</tr>
<tr>
<td>DURATION</td>
<td>COMMIT</td>
</tr>
<tr>
<td>AUTHID</td>
<td>IOA</td>
</tr>
<tr>
<td>PLAN</td>
<td>ARUDEV</td>
</tr>
<tr>
<td>CORRID</td>
<td>WURFF$U2</td>
</tr>
<tr>
<td>LUWID</td>
<td>USBMCN01.DEFFLU.CE4F9F076D3</td>
</tr>
<tr>
<td>THREAD TOKEN</td>
<td>43297</td>
</tr>
<tr>
<td>OWNING WORK UNIT</td>
<td>00D700251F0A2340</td>
</tr>
<tr>
<td>REQUEST WORK UNIT</td>
<td>00D700251F0A2340</td>
</tr>
<tr>
<td>DB2 MEMBER</td>
<td>DEFF</td>
</tr>
</tbody>
</table>
Table 69 on page 217 describes the fields in the waiter section of the DB2 deadlocks report.

Table 138: DB2 deadlocks—waiter field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>Lock waiters requested state</td>
</tr>
<tr>
<td>DURATION</td>
<td>Lock waiters requested duration</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>Lock holders requested function</td>
</tr>
<tr>
<td>WORTH</td>
<td>Lock holders worth value</td>
</tr>
<tr>
<td>AUTHID</td>
<td>Waiters authorization ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>Lock waiters plan name</td>
</tr>
<tr>
<td>CONNECT</td>
<td>Lock waiters connection ID</td>
</tr>
<tr>
<td>CORRID</td>
<td>Lock waiters correlation ID</td>
</tr>
<tr>
<td>LUWID</td>
<td>Lock waiters network ID</td>
</tr>
<tr>
<td>THREAD TOKEN</td>
<td>Waiters thread token</td>
</tr>
<tr>
<td>OWNING THREAD UNIT</td>
<td>Lock waiters owning work unit</td>
</tr>
<tr>
<td>REQUEST WORK UNIT</td>
<td>Lock waiters requesting work unit</td>
</tr>
<tr>
<td>DB2 MEMBER</td>
<td>Waiters DB2 member name</td>
</tr>
<tr>
<td>END USER ID</td>
<td>Waiters end user userID</td>
</tr>
<tr>
<td>WORK STATION</td>
<td>Waiters workstation name</td>
</tr>
<tr>
<td>TRANSACTION</td>
<td>Waiters transaction name</td>
</tr>
<tr>
<td>PROGRAM NAME</td>
<td>Waiter program name</td>
</tr>
<tr>
<td>COLLECTION ID</td>
<td>Waiter collection ID</td>
</tr>
<tr>
<td>LOCATION NAME</td>
<td>Holder location name</td>
</tr>
<tr>
<td>CONSIS TOKEN</td>
<td>Holder consistency token</td>
</tr>
</tbody>
</table>

SQL activity report fields

The topics in this section describe the most commonly used fields in the SQL activity reports.
**Note**
The field names may vary slightly due to formatting constraints in each report.

---

**Related Information**

- “SQL activity reports” on page 553

---

**SQL summary—exits**

This topic describes the exits section of the summary SQL report by PGM/PKG with workloads (BSQSUMPW).

**Figure 125: SQL summary—exits report**

<table>
<thead>
<tr>
<th>Exit Type</th>
<th>Count</th>
<th>Average Elapsed</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALIDATION CALLS</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>AVG ELAPSED</td>
<td>168</td>
<td>0.000002</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the exits section of the summary SQL report by PGM/PKG with workloads report.

**Table 139: SQL summary—exits field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALIDATION CALLS</td>
<td>Count of validation calls</td>
</tr>
<tr>
<td>AVG ELAPSED</td>
<td>Average exits elapsed</td>
</tr>
<tr>
<td>EDIT EXIT CALLS</td>
<td>Count of edit exits</td>
</tr>
<tr>
<td>AVG ELAPSED</td>
<td>Average edit exits elapsed</td>
</tr>
</tbody>
</table>

---

**SQL summary—highlights**

This topic describes the highlights section of the summary SQL report by PGM/PKG with workloads (BSQSUMPW).

**Figure 126: SQL summary—highlights report**

<table>
<thead>
<tr>
<th>Workload Highlight</th>
<th>Count</th>
<th>Average Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCANS</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>IO REQS</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>SUSPENDS</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>EXIT CALLS</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>AMS CALLS</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>ROWSproc</td>
<td>707</td>
<td>0.002315</td>
</tr>
<tr>
<td>AVELA</td>
<td>0.002315</td>
<td></td>
</tr>
<tr>
<td>AMS AVELAP</td>
<td>0.000002</td>
<td></td>
</tr>
<tr>
<td>AMS AVGELAPSED</td>
<td>N/P</td>
<td></td>
</tr>
<tr>
<td>DATA CAPTURE</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>CHKCONSTOK</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>CHKCONSTREJECT</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the highlights section of the summary SQL report by PGM/PKG with workloads report.
Table 140: SQL summary—highlights field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCANS</td>
<td>Count of records for rows processed—any record type</td>
</tr>
<tr>
<td>ROWSPROC</td>
<td>Sum of rows processed—any record type</td>
</tr>
<tr>
<td>PAGSSCAN</td>
<td>Pages scanned</td>
</tr>
<tr>
<td>REQ5</td>
<td>Total I/Os</td>
</tr>
<tr>
<td>AVELA</td>
<td>Average I/O elapsed</td>
</tr>
<tr>
<td>SUSPENDS</td>
<td>Total lock/latch suspends</td>
</tr>
<tr>
<td>SUSP AVELA</td>
<td>Average lock elapsed</td>
</tr>
<tr>
<td>DATACAPTUR</td>
<td>If there are IFI READS completed requested</td>
</tr>
<tr>
<td></td>
<td>Possible values: YES, NO</td>
</tr>
<tr>
<td>EXIT CALLS</td>
<td>Total exit calls</td>
</tr>
<tr>
<td>EXIT AVELAP</td>
<td>Average exits elapsed</td>
</tr>
<tr>
<td>CHKCONSTOK</td>
<td>Number of times a check constraint on a table received &quot;OK&quot; status</td>
</tr>
<tr>
<td>AMS CALLS</td>
<td>Number of times an AMS Command has completed. (see IFCID 97)</td>
</tr>
<tr>
<td>AMS AVGELAPSED</td>
<td>Average AMS calls elapsed</td>
</tr>
<tr>
<td>CHKCONSTREJECT</td>
<td>Number of times a check constraint on a table received &quot;REJ&quot; status</td>
</tr>
</tbody>
</table>

SQL summary—I/O activity

This topic describes the I/O activity section of the summary SQL report by PGM/PGK with workloads (BSQSUMPW).

Figure 127: SQL summary—I/O activity

Table 141: SQL summary—I/O activity field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O REQUESTS:</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total I/O count</td>
</tr>
</tbody>
</table>
### SQL activity report fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVGELAP</td>
<td>Average I/O elapsed</td>
</tr>
</tbody>
</table>

**READ REQUESTS (WITH OR WITHOUT I/O):**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>Total number of read requests (with or without I/O)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Type of request</td>
</tr>
<tr>
<td>AVGIOELAP</td>
<td>Average elapsed time (for specified type) of read I/O</td>
</tr>
<tr>
<td>%IO</td>
<td>Percentage of reads (for specified type) that used I/O</td>
</tr>
<tr>
<td>PAGES/IO</td>
<td>Average number of pages per type of read I/O</td>
</tr>
<tr>
<td>%NOIO</td>
<td>Percentage of reads (for specified type) that skipped I/O</td>
</tr>
</tbody>
</table>

**WRITE REQUESTS:**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>Total number of pages to write</td>
</tr>
<tr>
<td>TYPE</td>
<td>Type of request</td>
</tr>
<tr>
<td>CAST%</td>
<td>Average writes (for specified type) due to castout</td>
</tr>
<tr>
<td>AVGIOELAP</td>
<td>Average elapsed time between IFCID pair</td>
</tr>
<tr>
<td>PAGES/WRT</td>
<td>Average pages written to I/O for specified type</td>
</tr>
</tbody>
</table>

### SQL summary—lock suspension activity

This topic describes the lock suspension activity section of the summary SQL report by PGM/PKG with workloads (BSQSUMPW).

**Figure 128: SQL summary—lock suspension activity**

```
--- LOCK SUSPENSION ACTIVITY -------------------------------------------
<table>
<thead>
<tr>
<th>TYPE</th>
<th>SUSPEND REASON</th>
<th>NORMAL RESUME</th>
<th>TIMEOUT RESUME</th>
<th>DEADLOCK RESUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORMAL LOCK</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>NORMAL AGIN</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LOCAL LATCH</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH IRLMQ</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH IRLMQ</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH OTHER</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH GROUP</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH NOTIFY</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH OTHER</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH GROUP</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
<tr>
<td>LATCH GROUP</td>
<td>0</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
</tr>
</tbody>
</table>
```

Table 69 on page 217 describes the fields in the lock suspension activity section of the summary SQL report by PGM/PKG with workloads report.

**Table 142: SQL summary—lock suspension activity field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSPEND REASON:</td>
<td></td>
</tr>
<tr>
<td>LOCAL</td>
<td>Local resource contention</td>
</tr>
<tr>
<td>LATCH</td>
<td>IRLMQ latch contention</td>
</tr>
<tr>
<td>IRLMQ</td>
<td>IRLMQ queued request</td>
</tr>
</tbody>
</table>
### SQL summary—scan activity

This topic describes the scan activity section of the summary SQL report by PGM/PKG with workloads (BSQSUMPW).

**Figure 129: SQL summary—scan activity**

<table>
<thead>
<tr>
<th>SCANS</th>
<th>PROCESS</th>
<th>EXAMINE</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>INSERTS</th>
<th>UPDATES</th>
<th>DELETES</th>
<th>SCANNED</th>
<th>SCANS</th>
<th>DELETES</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>707</td>
<td>707</td>
<td>707</td>
<td>707</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>128</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the scan activity section of the summary SQL report by PGM/PKG with workloads report.

**Table 143: SQL summary—scan activity field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROWS:</td>
<td></td>
</tr>
<tr>
<td>SCANS</td>
<td>Count of rows processed—any record type</td>
</tr>
<tr>
<td>PROCESS</td>
<td>Sum of rows processed—any record type</td>
</tr>
</tbody>
</table>

QUALIFIED AT:

| EXAMINE | Sum of rows seen—right record type               |
| STAGE 1  | Sum of rows data manager qualified               |
### Thread SQL trace summary—page/row/LOB/XML locking

This topic describes the scan activity section of the thread SQL trace summary report by PGM/PKG and statement number with workloads (BSQTRCSW).

**Figure 130: Thread SQL trace summary—page/row/LOB/XML locking**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX LOCKS HELD</td>
<td>Maximum page locks held</td>
</tr>
<tr>
<td>SHARED ESCALATIONS</td>
<td>Number of locks escalated to shared</td>
</tr>
<tr>
<td>EXCLUSIVE ESCALATIONS</td>
<td>Number of locks escalated to exclusive</td>
</tr>
<tr>
<td>TOTAL LOCKS</td>
<td>Maximum page locks for a thread</td>
</tr>
<tr>
<td>PAGE LOCKS</td>
<td>Type of lock used = 01 (PAGE)</td>
</tr>
<tr>
<td>ROW LOCKS</td>
<td>Type of lock used = 02 (ROW)</td>
</tr>
<tr>
<td>LOB LOCKS</td>
<td>Type of lock used = 03 (LOB)</td>
</tr>
</tbody>
</table>

Table 69 on page 217 describes the fields in the page/row/LOB/XML locking section of the thread SQL trace summary report.

**Table 144: Thread SQL trace summary—page/row/LOB/XML locking field definitions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX LOCKS HELD</td>
<td>Maximum page locks held</td>
</tr>
<tr>
<td>SHARED ESCALATIONS</td>
<td>Number of locks escalated to shared</td>
</tr>
<tr>
<td>EXCLUSIVE ESCALATIONS</td>
<td>Number of locks escalated to exclusive</td>
</tr>
<tr>
<td>TOTAL LOCKS</td>
<td>Maximum page locks for a thread</td>
</tr>
<tr>
<td>PAGE LOCKS</td>
<td>Type of lock used = 01 (PAGE)</td>
</tr>
<tr>
<td>ROW LOCKS</td>
<td>Type of lock used = 02 (ROW)</td>
</tr>
<tr>
<td>LOB LOCKS</td>
<td>Type of lock used = 03 (LOB)</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>XML LOCKS</td>
<td>Type of lock used = 04 (XML)</td>
</tr>
<tr>
<td>MAX LOCKS HELD PER THD</td>
<td>Maximum page locks for a thread</td>
</tr>
<tr>
<td># LOCK ESCAL</td>
<td>Number of lock escalations</td>
</tr>
<tr>
<td>HIGHEST LOCK</td>
<td>Highest pageset lock state</td>
</tr>
<tr>
<td>LOCK AVOID SUCCESSFUL</td>
<td>Successful lock avoid for threads</td>
</tr>
</tbody>
</table>
Performance data tables

This section documents the Performance Reporter performance data tables. You can create queries and reports based on data from these tables. The following tables are discussed:

- “DB2 statistics tables” on page 339
- “DB2 accounting tables” on page 391
- “DB2 audit tables” on page 437

Each performance data table contains a ROWID column. This column is used for internal purposes only and contains no relevant data for end-user queries.

DB2 statistics tables

This section provides detailed information about each of the records in the Performance Reporter performance data tables that you can use to produce statistics reports.

The following tables are discussed:

- “Statistics table (DMRSTAT)” on page 340
- “DDF statistics table (DMRSTDF)” on page 369
- “Storage address space statistics table (DMRSTADT)” on page 372
- “System storage statistics table (DMRSTSDT)” on page 375
- “Pool detail buffer statistics table (DMRSBFDT)” on page 378
- “Statistics Accelerator detail and summary table (DMRSXxxx)” on page 385
Statistics table (DMRSTAT)

One statistics record is created from each pair of SMF 100 records. This record is further processed to create a delta record, showing the changes in values during this statistics interval.

Each row in the DMRSTAT table represents information about one statistics interval within DB2. Table 145 on page 340 lists the columns in the DMRSTAT table.

Note

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 145: DMRSTAT/DMRSTSUM columns

<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM100SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM100SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID - name of DB2 subsystem</td>
</tr>
<tr>
<td>QWHIS - Standard Header</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBBV because the field was not yet defined.</td>
</tr>
<tr>
<td></td>
<td>QWHSSUBBV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Interval for the summary accounting table</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| TRANSCNT                       | QWACPCNT for rollup records, otherwise, see description | YES            | Integer    | Transaction thread count For summary tables, this field contains the number of transactions that were used to calculate the column values.  
**Note:** This value is 1 for each detail statistics record.    |
| IFCIDSEQ#                      | QWHSISEQ             | NO             | Integer    | IFCID sequence number                                                                                                                      |
| DATETIME                       | QWHSSTCK             | YES            | Time stamp | Date and time record was created                                                                                                         |
| DATE                           | QWHSSTCK             | YES            | Date       | Date record was created                                                                                                                    |
| YEAR                           | QWHSSTCK             | YES            | Char(4)    | Year record was created                                                                                                                    |
| MONTH                          | QWHSSTCK             | YES            | Char(2)    | Month record was created                                                                                                                   |
| DAY                            | QWHSSTCK             | YES            | Char(2)    | Day record was created                                                                                                                     |
| TIME                           | QWHSSTCK             | YES            | Time       | Time record was created                                                                                                                    |
| HOUR                           | QWHSSTCK             | YES            | Char(2)    | Hour record was created                                                                                                                    |
| DAYOFWEEK#                     | QWHSSTCK             | NO             | Smallint   | Relative day of week, 1 to 7, where Monday=1 and Sunday=7                                                                                  |
| DAYOFWEEK                      | QWHSSTCK             | NO             | Char(3)    | MON, TUE, WED, THU, FRI, SAT, SUN                                                                                                          |
| WEEK#                          | QWHSSTCK             | NO             | Integer    | Week number relative to the 1 January 1900 epoch                                                                                           |
| TRACEMASK                      | QWHSMTN              | NO             | Integer    | Active trace mask                                                                                                                         |
| LOCATION                       | QWHSLOCN             | YES            | Char(16)   | Local location name (DB2 subsystem ID if not defined)                                                                                     |

**QWHA - Data Sharing**

| GROUPNAME                      | QWHADSGN             | YES            | Char(8)    | Data sharing group name                                                                                                                   |
| MEMBERNAME                     | QWHAMEMN             | YES            | Char(8)    | Data sharing member name                                                                                                                  |

**QWSA - Address Space**

<p>| DBMANESRB                      | QWSASRBT of DBM      | YES            | Decimal(15,6) | DBAS SRB CPU for the DBM address space (not including CPU consumed on zIIP)                                                              |
| DBMANETCB                      | QWSAEJST of DBM      | YES            | Decimal(15,6) | DBAS job step timer value for the DBM address space                                                                                       |
| DBMANPSRB                      | QWSAPSRRB            | NO             | Decimal(15,6) | Preemptable SRB CPU time for the DBM address space                                                                                         |
| DBMANPSRB_ZIIP                 | QWSAPSRRB_ZIIP       | NO             | Decimal(15,6) | Preemptable SRB CPU zIIP time for the DBM address space                                                                                     |</p>
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTPSRB</td>
<td>QWSAPSRB</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU time for the DIST address space</td>
</tr>
<tr>
<td>DISTPSRB_ZIIP</td>
<td>QWSAPSRB_ZIIP</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU zIIP time for the DIST address space</td>
</tr>
<tr>
<td>DISTSRB</td>
<td>QWSASRBT of DIST</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SRB CPU for the DIST address space (not including CPU consumed on zIIP)</td>
</tr>
<tr>
<td>DISTETCB</td>
<td>QWSAEJST of DIST</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Job step timer value for the DIST address space</td>
</tr>
<tr>
<td>DISTTCB</td>
<td>QWSAEJST of DIST</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Job step TCB CPU for the DIST address space</td>
</tr>
<tr>
<td>IRLMESRB</td>
<td>QWSASRBT of IRLM</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SRB CPU for the IRLM address space (not including CPU consumed on zIIP)</td>
</tr>
<tr>
<td>IRLMETCB</td>
<td>QWSAEJST of IRLM</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Job step timer value for the IRLM address space</td>
</tr>
<tr>
<td>IRLMPSRB</td>
<td>QWSAPSRB</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU time for the IRLM address space</td>
</tr>
<tr>
<td>IRLMPSRB_ZIIP</td>
<td>QWSAPSRB_ZIIP</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU zIIP time for the IRLM address space</td>
</tr>
<tr>
<td>SPASPSRB</td>
<td>QWSAPSRB</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU time for SPAS address space</td>
</tr>
<tr>
<td>SPASPSRB_ZIIP</td>
<td>QWSAPSRB_ZIIP</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU zIIP time for SPAS address space</td>
</tr>
<tr>
<td>SPASSRB</td>
<td>QWSASRBT of SPAS</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SRB CPU for the SPAS address space (not including CPU consumed on zIIP)</td>
</tr>
<tr>
<td>SPASETCB</td>
<td>QWSAEJST of SPAS</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Job step timer value for the SPAS address space</td>
</tr>
<tr>
<td>SPASTCB</td>
<td>QWSAEJST of SPAS</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Job step TCB CPU for the SPAS address space</td>
</tr>
<tr>
<td>SSERVESRB</td>
<td>QWSASRBT of MSTR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SSAS SRB CPU for the MSTR address space (not including CPU consumed on zIIP)</td>
</tr>
<tr>
<td>SSERVETCB</td>
<td>QWSAEJST of MSTR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SSAS job step timer value for the MSTR address space</td>
</tr>
<tr>
<td>SSERVPSRB</td>
<td>QWSAPSRB</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU time for the MSTR address space</td>
</tr>
<tr>
<td>SSERVPSRB_ZIIP</td>
<td>QWSAPSRB_ZIIP</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Preemptable SRB CPU zIIP time for the MSTR address space</td>
</tr>
</tbody>
</table>

**Q3ST - Subsystem Services**

| CREATETHREADS | Q3STCPTHD | YES | Integer | Create threads |

---

*MainView for DB2 Performance Reporter User Guide*
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIURREQ</td>
<td>Q3STRIUR</td>
<td>YES</td>
<td>Integer</td>
<td>Resolves</td>
</tr>
<tr>
<td>P1COMMITS</td>
<td>Q3STPREP</td>
<td>YES</td>
<td>Integer</td>
<td>Prepare to commit</td>
</tr>
<tr>
<td>P2COMMITS</td>
<td>Q3STCOMM</td>
<td>YES</td>
<td>Integer</td>
<td>Commits</td>
</tr>
<tr>
<td>ABORTS</td>
<td>Q3STABRT</td>
<td>YES</td>
<td>Integer</td>
<td>Rollbacks</td>
</tr>
<tr>
<td>SYNC_COMMITMENTS</td>
<td>Q3STSSYNC</td>
<td>YES</td>
<td>Integer</td>
<td>Synchronous commits</td>
</tr>
<tr>
<td>INDUBT</td>
<td>Q3STINDT</td>
<td>YES</td>
<td>Integer</td>
<td>Indoubts</td>
</tr>
<tr>
<td>ENDOFTASKS</td>
<td>Q3STMEOOT</td>
<td>YES</td>
<td>Integer</td>
<td>End of tasks</td>
</tr>
<tr>
<td>ENDOFMEMS</td>
<td>Q3STMEOOM</td>
<td>YES</td>
<td>Integer</td>
<td>End of memories</td>
</tr>
<tr>
<td>CTHREADWAIT</td>
<td>Q3STCTHW</td>
<td>YES</td>
<td>Integer</td>
<td>Create threads that waited</td>
</tr>
<tr>
<td>IDENTIFIES</td>
<td>Q3STIDEN</td>
<td>NO</td>
<td>Integer</td>
<td>Identify requests</td>
</tr>
<tr>
<td>SIGNONS</td>
<td>Q3STSIGN</td>
<td>NO</td>
<td>Integer</td>
<td>Signons</td>
</tr>
<tr>
<td>TERMINATES</td>
<td>Q3STTERM</td>
<td>NO</td>
<td>Integer</td>
<td>Terminates</td>
</tr>
<tr>
<td>EXITREQ</td>
<td>Q3STEXIT</td>
<td>NO</td>
<td>Integer</td>
<td>Exit requests</td>
</tr>
<tr>
<td>SSICALLS</td>
<td>Q3STSSSI</td>
<td>NO</td>
<td>Integer</td>
<td>Number of SSI calls processed</td>
</tr>
<tr>
<td>RCOMMITs</td>
<td>Q3STRDON</td>
<td>NO</td>
<td>Integer</td>
<td>Read-only commits</td>
</tr>
<tr>
<td>IDBACKMAX</td>
<td>Q3STHWIB</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum number of connections to a single instance from batch or TSO background tasks</td>
</tr>
<tr>
<td>IDFOREMAX</td>
<td>Q3STHWIF</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum number of connections to a single instance from TSO foreground tasks</td>
</tr>
<tr>
<td>CTHREADMAX</td>
<td>Q3STHWCT</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum number of allied threads that are allocated concurrently</td>
</tr>
</tbody>
</table>

**QJST - Log Manager**

<table>
<thead>
<tr>
<th>QJST - Log Manager</th>
<th>QJSTWRNW</th>
<th>YES</th>
<th>Integer</th>
<th>Log write nowait</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRITEFORCE</td>
<td>QJSTWRF</td>
<td>YES</td>
<td>Integer</td>
<td>Log write force</td>
</tr>
<tr>
<td>UABUFFWAIT</td>
<td>QJSTWTB</td>
<td>YES</td>
<td>Integer</td>
<td>Log write unavailable buffer</td>
</tr>
<tr>
<td>OBREADS</td>
<td>QJSTRBUF</td>
<td>YES</td>
<td>Integer</td>
<td>Log reads from buffer</td>
</tr>
<tr>
<td>ACTLREADS</td>
<td>QJSTRACT</td>
<td>YES</td>
<td>Integer</td>
<td>Log reads from active</td>
</tr>
<tr>
<td>ARCLREADS</td>
<td>QJSTRARH</td>
<td>YES</td>
<td>Integer</td>
<td>Log reads from archive</td>
</tr>
<tr>
<td>VOLCONTDELAY</td>
<td>QJSTTVC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of read accesses delayed because of tape volume contention</td>
</tr>
<tr>
<td>BSDSREQ</td>
<td>QJSTBSDS</td>
<td>YES</td>
<td>Integer</td>
<td>BSDS requests</td>
</tr>
<tr>
<td>ALOGICIC</td>
<td>QJSTBFFFL</td>
<td>YES</td>
<td>Integer</td>
<td>Active log output CIs</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>LWRCALLS</td>
<td>QISTBFWR</td>
<td>YES</td>
<td>Integer</td>
<td>Log write requests</td>
</tr>
<tr>
<td>ARCLOGRALLOC</td>
<td>QJSTALR</td>
<td>YES</td>
<td>Integer</td>
<td>Archive log read allocations</td>
</tr>
<tr>
<td>ARCLOGWALLOC</td>
<td>QJSTALW</td>
<td>YES</td>
<td>Integer</td>
<td>Archive log write allocations</td>
</tr>
<tr>
<td>CNTLINTOFF</td>
<td>QJSTCIOF</td>
<td>YES</td>
<td>Integer</td>
<td>Number of control intervals offloaded</td>
</tr>
<tr>
<td>UNAVAILRESCS</td>
<td>QJSTWUR</td>
<td>YES</td>
<td>Integer</td>
<td>Number of read accesses delayed because of unavailable resources</td>
</tr>
<tr>
<td>LOOKAHEADATT</td>
<td>QJSTLAMA</td>
<td>YES</td>
<td>Integer</td>
<td>Number of look-ahead tape mounts attempted</td>
</tr>
<tr>
<td>LOOKAHEADSUC</td>
<td>QJSTLAMS</td>
<td>YES</td>
<td>Integer</td>
<td>Number of successful look-ahead tape mounts</td>
</tr>
<tr>
<td>LOGSUSPENDS</td>
<td>QJSTLSUS</td>
<td>YES</td>
<td>Integer</td>
<td>Number of times that a log manager request results in a suspend for a log record that is being written out to the log data sets</td>
</tr>
<tr>
<td>LOGWRITES</td>
<td>QJSTLOGW</td>
<td>YES</td>
<td>Integer</td>
<td>Total number of log write I/O requests (Media Manager calls)</td>
</tr>
<tr>
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<td>LOGTHRESHOLD</td>
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<td>LOGBUFPAGEIN</td>
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**QX - SQL Statement**

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<tr>
<th>SQL Statement</th>
<th>SMF field name</th>
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<th>Field type</th>
<th>Description</th>
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<td>SMF field name</td>
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<td>Field type</td>
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<td>Total number of parallel groups that fall back to sequential operation because of storage shortage or contention on the buffer pool</td>
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<td>Total number of parallel groups processed to a parallel degree less than planned because of a storage shortage or contention on the buffer pool</td>
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<td>Number of parallel groups executed on a single DB2 because of Coordinator value set to NO</td>
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<td>Total number of parallel groups executed on a single DB2 because the plan or package was bound with an isolation value of repeatable read</td>
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<td>Number of parallel groups DB2 intended to run across the data sharing group</td>
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<td>Number of times the parallelism coordinator had to bypass a DB2 because of not enough buffer pool storage</td>
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<td>SMF field name</td>
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<td>Field type</td>
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<td>PREFNFD</td>
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<td>Number of times DB2 satisfied a PREPARE request by making a copy of a statement in the prepared statement cache</td>
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<td>Number of times DB2 searched the prepared statement cache but could not find a suitable prepared statement</td>
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<td>Integer</td>
<td>Number of times DB2 did an implicit PREPARE for a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache did not contain a valid copy of the prepared statement</td>
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<td>PREPNOIMPLICIT</td>
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<td>Number of times DB2 did not PREPARE a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache contained a valid copy of the prepared statement</td>
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<td>PREPDISCMAX</td>
<td>QXSTDEXP</td>
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<td>Number of times DB2 discarded a prepared statement from the prepared statement cache because MAXKEEPD was exceeded</td>
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<td>Number of times DB2 discarded a prepared statement from the prepared statement cache because a program executed a DROP, ALTER, or REVOKE statement against a dependent object</td>
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<td>Number of parallel groups for which DB2 reformulated the parallel portion of the access path because the SYSPLEX configuration at run time was different from the SYSPLEX configuration at bind time. This counter is incremented only by the parallelism coordinator at run time</td>
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<td>Number of times an SQL error occurred during the execution of a triggered action</td>
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<td>Field type</td>
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<td>Maximum level of nested SQL cascading due to triggers, user-defined functions, and stored procedures</td>
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<td>Parallel groups using DECLARE TEMPORARY TABLE</td>
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<td>CREATEALIAS</td>
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<td>DROPALIAS</td>
<td>QXDRPAL</td>
<td>NO</td>
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<tr>
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<td>Integer</td>
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</tr>
<tr>
<td>MULTINDEXNOS</td>
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<td>Integer</td>
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<td>MULTINDEXNOM</td>
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<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
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<td>NO</td>
<td>Bigint</td>
<td>Number of rows fetched</td>
</tr>
<tr>
<td>ROWSINSRTD</td>
<td>QXRWSINSRTD</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of rows inserted</td>
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<tr>
<td>ROWSUPD</td>
<td>QXRWSUPDTD</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of rows updated</td>
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<tr>
<td>ROWSDEL</td>
<td>QXRWSDELDT</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of rows deleted</td>
</tr>
<tr>
<td>RIDSOVFLST</td>
<td>QXRFRID</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of times a RID list overflowed to a work file because no RIDPOOL storage was available to hold the list of RIDs</td>
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<td>RIDSOVFLLM</td>
<td>QXRFRIDT</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of times a RID list overflowed to a work file because the number of RIDs exceeded one or more internal limits</td>
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<tr>
<td>RIDSHIJINTST</td>
<td>QXRHINC</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of times a RID list append for a hybrid join was interrupted because no RIDPOOL storage was available to hold the list of RIDs</td>
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<td>RIDSHIJINTLM</td>
<td>QXRHINCT</td>
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<td>RIDMIAPSKIP</td>
<td>QXRSMIA</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of times a RID list retrieval for multiple index access was skipped because it was unnecessary because DB2 could predetermine the outcome of index ANDing or ORing</td>
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<td>CURDBATSRELDEAL</td>
<td>QXDTNARD</td>
<td>NO</td>
<td>Integer</td>
<td>Current number of dbats with release (deallocate)</td>
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<td>MAXDBATSRELDEAL</td>
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<td>Integer</td>
<td>Maximum number of dbats with release (deallocate)</td>
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**QT - Bind Data**

<p>| AAUTOBINDS                     | QTABINDA        | YES            | Integer    | Autobind attempts |</p>
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<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
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<tr>
<td>SAUTOBINDS</td>
<td>QTABIND</td>
<td>YES</td>
<td>Integer</td>
<td>Successful autobinds</td>
</tr>
<tr>
<td>AUTHCHECKS</td>
<td>QTAUCHK</td>
<td>YES</td>
<td>Integer</td>
<td>Authorization checks</td>
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<tr>
<td>SAUTHCHECKS</td>
<td>QTAUSUC</td>
<td>YES</td>
<td>Integer</td>
<td>Successful authorization checks</td>
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<tr>
<td>APALLOCS</td>
<td>QTALLOCA</td>
<td>NO</td>
<td>Integer</td>
<td>Plan allocation attempts</td>
</tr>
<tr>
<td>SPAŁLOCS</td>
<td>QTALLOC</td>
<td>NO</td>
<td>Integer</td>
<td>Successful plan allocations</td>
</tr>
<tr>
<td>BINDINVRES</td>
<td>QTINVRID</td>
<td>NO</td>
<td>Integer</td>
<td>Invalid resource IDs</td>
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<tr>
<td>BINDADD</td>
<td>QTBINDA</td>
<td>NO</td>
<td>Integer</td>
<td>Bind add subcommands</td>
</tr>
<tr>
<td>BINDREPL</td>
<td>QTBINDR</td>
<td>NO</td>
<td>Integer</td>
<td>Bind replace subcommands</td>
</tr>
<tr>
<td>TESTBIND</td>
<td>QTTESTB</td>
<td>NO</td>
<td>Integer</td>
<td>Test bind subcommands</td>
</tr>
<tr>
<td>PLANSBOUND</td>
<td>QTPLNBD</td>
<td>NO</td>
<td>Integer</td>
<td>Number of plans bound</td>
</tr>
<tr>
<td>REBINDS</td>
<td>QTREBIND</td>
<td>NO</td>
<td>Integer</td>
<td>Rebind subcommands</td>
</tr>
<tr>
<td>AREBINDS</td>
<td>QTRBINDA</td>
<td>NO</td>
<td>Integer</td>
<td>Rebind attempts</td>
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<tr>
<td>SREBINDS</td>
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<td>Integer</td>
<td>Successful rebinds</td>
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<td>BINDFREES</td>
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<td>Integer</td>
<td>Free plan subcommands</td>
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<td>BINDAFREES</td>
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<td>NO</td>
<td>Integer</td>
<td>Free plan attempts</td>
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<td>BINDSFREES</td>
<td>QTPLNFRD</td>
<td>NO</td>
<td>Integer</td>
<td>Number of plans freed</td>
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<tr>
<td>CURROPE</td>
<td>QTDSOPN</td>
<td>NO</td>
<td>Integer</td>
<td>Number of data sets currently open</td>
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<tr>
<td>MAXOPEN</td>
<td>QTMAXDS</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum data sets open concurrently</td>
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<tr>
<td>AUTHCKCACHE</td>
<td>QTAUCCH</td>
<td>NO</td>
<td>Integer</td>
<td>Successful authorization checks from cache</td>
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<tr>
<td>AUTHCKPUB</td>
<td>QTAUPUB</td>
<td>NO</td>
<td>Integer</td>
<td>Number of successful PUBLIC authority checks</td>
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<tr>
<td>MAXPAGBLK</td>
<td>QTMAXPB</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum page set blocks on deferred close queue</td>
</tr>
<tr>
<td>PKGACAUTH</td>
<td>QTPACAUT</td>
<td>NO</td>
<td>Integer</td>
<td>Number of successful checks for package execute authority made using the package authorization cache including public authorization checks</td>
</tr>
<tr>
<td>PKGACPUB</td>
<td>QTPACPUB</td>
<td>NO</td>
<td>Integer</td>
<td>Number of successful checks for package execute authority held by public</td>
</tr>
<tr>
<td>PKGACNOT</td>
<td>QTPACNOT</td>
<td>NO</td>
<td>Integer</td>
<td>Number of unsuccessful checks for package execute authority made using the package authorization cache because an applicable entry was not found in the cache</td>
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<tr>
<td>REOPEN</td>
<td>QTREOPEN</td>
<td>NO</td>
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<td>Reopen from slow close</td>
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<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
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<tr>
<td>PKGACOWID</td>
<td>QTPACOW1</td>
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<td>Number of times DB2 overwrote an authorization ID in the cache</td>
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<tr>
<td>PKGACOWENT</td>
<td>QTPACOW2</td>
<td>NO</td>
<td>Integer</td>
<td>Number of times DB2 overwrote an entry for a package or collection in the cache</td>
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<tr>
<td>DRAINDSN</td>
<td>QTDSDRN</td>
<td>NO</td>
<td>Integer</td>
<td>Number of data sets closed by slow drain because the deferred close threshold was reached</td>
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<tr>
<td>RWROCONVERT</td>
<td>QTPCCT</td>
<td>NO</td>
<td>Integer</td>
<td>Number of data sets converted from R/W to R/O</td>
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<tr>
<td>SLOWCLSDD</td>
<td>QTLSLWDD</td>
<td>NO</td>
<td>Integer</td>
<td>Number of data sets not currently used, but not closed because of deferred close</td>
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<tr>
<td>BINDADDPK</td>
<td>QTBINDPA</td>
<td>NO</td>
<td>Integer</td>
<td>Bind add package</td>
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<tr>
<td>BINDREPLPK</td>
<td>QTBINDPR</td>
<td>NO</td>
<td>Integer</td>
<td>Bind replace package</td>
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<td>PKGBIND</td>
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<td>Packages bound</td>
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<td>REBINDPK</td>
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<td>Integer</td>
<td>Rebind package</td>
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<td>REBINDPKA</td>
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<td>Integer</td>
<td>Rebind package attempts</td>
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<td>Integer</td>
<td>Rebind package successful</td>
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<td>FREEPKGC</td>
<td>QTFREEP</td>
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<td>FREEPKGA</td>
<td>QTFREEAP</td>
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<td>Integer</td>
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<td>FREEPKGS</td>
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<td>DMRACSHARE</td>
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<td>NO</td>
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<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
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**QTXA - Lock Usage**

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<td>Integer</td>
<td>Suspends - lock conflict</td>
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<tr>
<td>TIMEOUTS</td>
<td>QTXATIM</td>
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<td>Integer</td>
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<td>LOCKESHR</td>
<td>QTXALES</td>
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<td>Integer</td>
<td>Lock escalation to shared</td>
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<tr>
<td>LOCKEXCL</td>
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<td>Lock escalation to exclusive</td>
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<td>Maximum number of page or row locks held</td>
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<td>Field type</td>
<td>Description</td>
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<td>Integer</td>
<td>Suspend other reasons</td>
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<td>CLAIMREQUNSC</td>
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<td>EDM pool full failures</td>
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<td>LOADCTS</td>
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<td>Integer</td>
<td>Load CT sections</td>
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<td>Integer</td>
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<td>Integer</td>
<td>Number of pages for DBD This value is the number of pages used in the DBD pool.</td>
</tr>
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<td>Number of pages for SKCT</td>
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<td>Integer</td>
<td>Requests for DBD</td>
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<td>Load DBD</td>
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<td>PKGREQS</td>
<td>QISEKTG</td>
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<td>Integer</td>
<td>Package requests</td>
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<td>PKGLOAD</td>
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<td>Number of pages for PT above the 2GB bar</td>
</tr>
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<td>Skeleton package table pages</td>
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<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
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<td>DYNSTMTINS</td>
<td>QISEDSI</td>
<td>YES</td>
<td>Integer</td>
<td>Number of inserts into the dynamic statement cache</td>
</tr>
<tr>
<td>DYNSTMTREQ</td>
<td>QISEDSG</td>
<td>YES</td>
<td>Integer</td>
<td>Number of requests to the dynamic statement cache</td>
</tr>
<tr>
<td>DSPACEEDM</td>
<td>QISEDPG</td>
<td>YES</td>
<td>Integer</td>
<td>Number of pages in the data space used by the EDM pool</td>
</tr>
<tr>
<td>DSPACETFREE</td>
<td>QISEDPR</td>
<td>YES</td>
<td>Integer</td>
<td>Number of free pages in the data space free chain</td>
</tr>
<tr>
<td>DSPACETFULL</td>
<td>QISEDPP</td>
<td>YES</td>
<td>Integer</td>
<td>Number of failures because the data space is full</td>
</tr>
<tr>
<td>DBDPOOLFULL</td>
<td>QISEDFAL</td>
<td>NO</td>
<td>Integer</td>
<td>Number of failures because the EDM DBD (Database Descriptors) pool is full</td>
</tr>
<tr>
<td>DBDPOOLTOT</td>
<td>QISEDPG</td>
<td>NO</td>
<td>Integer</td>
<td>Total number of pages in the EDM DBD (Database Descriptors) pool, which can be used for SQL dynamic statement caching</td>
</tr>
<tr>
<td>DBDPOOLFREE</td>
<td>QISEDPR</td>
<td>NO</td>
<td>Integer</td>
<td>Number of free pages in the EDM DBD (Database Descriptors) pool free chain</td>
</tr>
<tr>
<td>STMTPOOLFULL</td>
<td>QISECFAL</td>
<td>NO</td>
<td>Integer</td>
<td>Number of below the 2GB bar EDM pool statement cache full failures</td>
</tr>
<tr>
<td>STMTPOOLTOT</td>
<td>QISECPGE</td>
<td>NO</td>
<td>Integer</td>
<td>Number of pages below the 2GB bar in the statement pool</td>
</tr>
<tr>
<td>STMTPOOLFREE</td>
<td>QISECFRE</td>
<td>NO</td>
<td>Integer</td>
<td>Number of free pages below the 2GB bar in the statement pool free chain</td>
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<tr>
<td>STMTPOOLPAGES</td>
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<td>Number of pages used for the statement pool</td>
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<tr>
<td>STMTPOOLABTOT</td>
<td>QISESPGE</td>
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<td>Integer</td>
<td>Number of pages above the 2GB bar in the statement pool</td>
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<tr>
<td>STMTPOOLABFULL</td>
<td>QISESFAL</td>
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<td>Integer</td>
<td>Number of above the 2GB bar EDM pool statement cache full failures</td>
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<tr>
<td>SKELPOOLABTOT</td>
<td>QISEKPGE</td>
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<td>Integer</td>
<td>Number of pages in the skeleton pool</td>
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<tr>
<td>SKELPOOLABFREE</td>
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<td>Number of free pages in the skeleton pool free chain</td>
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<td>QISEKFAL</td>
<td>NO</td>
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<tr>
<td>SKELPOOLFULL</td>
<td>QISEKFAL</td>
<td>NO</td>
<td>Integer</td>
<td>Number of failures because the statement pool was full</td>
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</table>

**Note:** This value valid for DB2 Versions 11 and earlier. For DB2 Versions 12 and later, a zero value is displayed.
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
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</thead>
</table>
| SKELPOOLTOT                     | QISEKPGE       | NO             | Integer    | Number of pages in the EDM statement pool  
Note: This value valid for DB2 Versions 11 and earlier. For DB2 Versions 12 and later, a zero value is displayed. |
| SKELPOOLFREE                    | QISEKFRE       | NO             | Integer    | Number of free pages in the EDM statement pool  
Note: This value valid for DB2 Versions 11 and earlier. For DB2 Versions 12 and later, a zero value is displayed. |
<p>| NFCACHELOC                      | QISEKNFM       | NO             | Integer    | Number of cached not found records located |
| NFADDCACHE                      | QISEKNFA       | NO             | Integer    | Number of not found records added to the cache |
| NFREMCACHE                      | QISEKNFR       | NO             | Integer    | Number not found records removed from the cache |
| QISJ - Star Join Pool           |                |                |            |            |
| STARJOINREQS                    | QISJTRY        | NO             | Integer    | Number of allocation requests in Star Join pool |
| STARJOINFAIL                    | QISJFAIL       | NO             | Integer    | Number of failures because the Star Join pool is full |
| STARJOINSIZE                    | QISJSIZE       | NO             | Integer    | Current size of Star Join pool in MB |
| STARJOINMAX                     | QISJMAX        | NO             | Integer    | Maximum size of Star Join pool in MB |
| QIST - Data Manager Control     |                |                |            |            |
| RIDTRMRDS                        | QISTRLLM       | YES            | Integer    | RID terminated - over RDS limit |
| RIDTRMDM                        | QISTRPLM       | YES            | Integer    | RID terminated - over DM limit |
| RIDHIBLKS                       | QISTRHIG       | YES            | Integer    | RID high blocks allocated |
| RIDCURBLKS                      | QISTRCUR       | YES            | Integer    | RID current blocks allocated |
| RIDTRMSTG                       | QISTRSTG       | YES            | Integer    | RID terminated - no storage |
| RIDTRMNUM                       | QISTRMAX       | YES            | Integer    | RID terminated - too many concurrent |
| COLSINVALIDS                    | QISTCOLS       | YES            | Integer    | Number of COLUMNS INVALID SELECT encountered |
| WKFLDBTOTMB                     | QISTWFCU       | NO             | Integer    | Work file database current total storage used (MB) |
| WKFLDBTOTKB                     | QISTWFCK       | NO             | Integer    | Work file database current total storage used (KB) |
| WKFLDBMAX                       | QISTWFMU       | NO             | Integer    | Work file database maximum storage used (MB) |</p>
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<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
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<tr>
<td>WKFLDBMAXAGNT</td>
<td>QISTWFMX</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum storage allowed per agent (MB)</td>
</tr>
<tr>
<td>WKFLDBMAXAGNTEX</td>
<td>QISTWFNE</td>
<td>NO</td>
<td>Integer</td>
<td>Times maximum storage per agent exceeded</td>
</tr>
<tr>
<td>TS4KUSEDMB</td>
<td>QISTWF04</td>
<td>NO</td>
<td>Integer</td>
<td>Total 4K tablespace storage used (MB)</td>
</tr>
<tr>
<td>TS32KUSEDMB</td>
<td>QISTWF32</td>
<td>NO</td>
<td>Integer</td>
<td>Total 32K tablespace storage used (MB)</td>
</tr>
<tr>
<td>TS4KUSEDKB</td>
<td>QISTW04K</td>
<td>NO</td>
<td>Integer</td>
<td>Total 4K tablespace storage used (KB)</td>
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<tr>
<td>TS32KUSEDKB</td>
<td>QISTW32K</td>
<td>NO</td>
<td>Integer</td>
<td>Total 32K tablespace storage used (KB)</td>
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<tr>
<td>TS32KUSE4KPRF</td>
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<td>NO</td>
<td>Integer</td>
<td>Number of times a 32K tablespace was used when 4K was preferred but unavailable</td>
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<tr>
<td>TS4KUSE32KPRF</td>
<td>QISTWF02</td>
<td>NO</td>
<td>Integer</td>
<td>Number of times a 4K tablespace was used when 32K was preferred but unavailable</td>
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<tr>
<td>READCURCOMINS</td>
<td>QISTRCCI</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rows skipped by read transaction due to uncommitted insert when using Currently Committed semantic for fetch</td>
</tr>
<tr>
<td>READCURCOMDEL</td>
<td>QISTRCCD</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rows accessed by read transaction due to uncommitted delete when using Currently Committed semantic for fetch</td>
</tr>
<tr>
<td>READCURCOMUPPD</td>
<td>QISTRCCU</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rows accessed by read transaction due to uncommitted update when using Currently Committed</td>
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<tr>
<td>MAXSTORUSEAGT</td>
<td>QISTWMXA</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum storage used per agent</td>
</tr>
<tr>
<td>MAXSTORUSEWFL</td>
<td>QISTWMXU</td>
<td>NO</td>
<td>Bigint</td>
<td>Maximum storage used in work file database</td>
</tr>
<tr>
<td>CURSTORUSEWFL</td>
<td>QISTWCTO</td>
<td>NO</td>
<td>Bigint</td>
<td>Current storage use in work file database</td>
</tr>
<tr>
<td>CUR4KSTORUSED</td>
<td>QISTW4K</td>
<td>NO</td>
<td>Bigint</td>
<td>Current 4K table space storage used</td>
</tr>
<tr>
<td>CURIMWKFLACT</td>
<td>QISTIMAC</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of DM work files currently active</td>
</tr>
<tr>
<td>IMACTOTSPCUSED</td>
<td>QISTIMSC</td>
<td>NO</td>
<td>Bigint</td>
<td>Total space used for current in-memory work files</td>
</tr>
<tr>
<td>HWMIMWKFLACT</td>
<td>QISTIMAH</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark for DM in-memory work files active</td>
</tr>
<tr>
<td>HWMIMACTOTSPCUSE</td>
<td>QISTIMSH</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark for space used for current in-memory work files</td>
</tr>
<tr>
<td>SRTIMWKFILESACT</td>
<td>QISTSIAC</td>
<td>NO</td>
<td>Bigint</td>
<td>Sort in-memory work files currently active</td>
</tr>
<tr>
<td>SPCUSSRTIMFLWKF</td>
<td>QISTSISC</td>
<td>NO</td>
<td>Bigint</td>
<td>Space used for sort in-memory work files currently active</td>
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<tr>
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<td>NO</td>
<td>Bigint</td>
<td>High water mark for sort in-memory work file currently active</td>
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<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
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<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>HWMSPCUSSRTIMWKF</td>
<td>QISTSISH</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark for space used for sort in-memory work files</td>
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<tr>
<td>HWMRIDSSTOREDWKF</td>
<td>QISTWFRHIG</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark for RID blocks stored to work files</td>
</tr>
<tr>
<td>CURRIDSSTOREDWKF</td>
<td>QISTWFRCUR</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of RID blocks currently in work file storage</td>
</tr>
<tr>
<td>NONSORTFILESACTV</td>
<td>QISTI2AC</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of non-SORT memory work files that are currently active</td>
</tr>
</tbody>
</table>

**QTRA - Authorization Checks**

| RACSUCC                        | QTRACAUT       | NO            | Integer    | Number of successful authorization checks for user-defined functions or stored procedures that use the routine authorization cache, including public authorization checks (QTRACPUB) |
| RACPUBLIC                      | QTRACPUB       | NO            | Integer    | Number of successful authorization checks for user-defined function or stored procedure execution authority when that authority is held by public |
| RACNOTUSED                     | QTRACNOT       | NO            | Integer    | Number of authorization checks for user-defined function or stored procedure execution authority that could not use the routine authorization cache |
| RACOWID                        | QTRACOW1       | NO            | Integer    | Number of times that DB2 wrote over an authorization ID in the routine authorization cache          |
| RACOWENT                       | QTRACOW2       | NO            | Integer    | Number of times that DB2 wrote over a routine entry in the routine authorization cache              |
| RACNOTADD                      | QTRACNAC       | NO            | Integer    | Number of times that DB2 could not add an entry to the routine authorization cache                  |

**QBST - Buffer Manager**

<p>| BPGETPAGE                      | QBSTGET        | YES           | Integer    | Number of GETPAGES                                                                                   |
| BPREADS                        | QBSTRIO        | YES           | Integer    | Synchronous read I/O                                                                                  |
| BPDWV                          | QBSTDWV        | YES           | Integer    | Number of times the vertical deferred write threshold was reached                                     |
| BPFAILMAX                      | QBSTXFL        | YES           | Integer    | Expansions failed - pool was full                                                                     |
| BPFAILSOS                      | QBSTXFV        | YES           | Integer    | Expansions failed - GETMAIN                                                                           |
| BPPGUPDAT                      | QBSTSW5        | YES           | Integer    | Number of page update requests                                                                       |
| BPPGWRTIN                      | QBSTPWS        | YES           | Integer    | Pages written                                                                                        |</p>
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
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<tbody>
<tr>
<td>BPASYNCWR</td>
<td>QBSTWIO</td>
<td>YES</td>
<td>Integer</td>
<td>Asynchronous writes</td>
</tr>
<tr>
<td>BACTBUFF</td>
<td>QBSTCBA</td>
<td>YES</td>
<td>Integer</td>
<td>Current active buffers</td>
</tr>
<tr>
<td>BPPAGEINRD</td>
<td>QBSTRI</td>
<td>YES</td>
<td>Integer</td>
<td>Page ins for read I/O</td>
</tr>
<tr>
<td>BPPAGEINWR</td>
<td>QBSTWPI</td>
<td>YES</td>
<td>Integer</td>
<td>Page ins for write I/O</td>
</tr>
<tr>
<td>BPOPENSOK</td>
<td>QBSTDSO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of successful opens</td>
</tr>
<tr>
<td>BPSYNCWR</td>
<td>QBSTIMW</td>
<td>YES</td>
<td>Integer</td>
<td>Immediate (synchronous) write I/O</td>
</tr>
<tr>
<td>BPPFREQS</td>
<td>QBSTSEQ</td>
<td>YES</td>
<td>Integer</td>
<td>Number of sequential prefetch requests</td>
</tr>
<tr>
<td>BPPAGESRD</td>
<td>QBSTSP</td>
<td>YES</td>
<td>Integer</td>
<td>Prefetch pages read</td>
</tr>
<tr>
<td>BPPFNOBF</td>
<td>QBSTSPD</td>
<td>YES</td>
<td>Integer</td>
<td>Prefetch disabled - no buffers</td>
</tr>
<tr>
<td>BPPFNORDN</td>
<td>QBSTREE</td>
<td>YES</td>
<td>Integer</td>
<td>Prefetch disabled - no read engine</td>
</tr>
<tr>
<td>BPDEFWRITE</td>
<td>QBSTDWT</td>
<td>YES</td>
<td>Integer</td>
<td>Times deferred write threshold reached</td>
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<tr>
<td>BPDMCRITIC</td>
<td>QBSTDMC</td>
<td>YES</td>
<td>Integer</td>
<td>Times DM critical threshold reached</td>
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<tr>
<td>BPMIGDS</td>
<td>QBSTMIG</td>
<td>YES</td>
<td>Integer</td>
<td>Migrated data sets encountered</td>
</tr>
<tr>
<td>BPRTO</td>
<td>QBSTRTO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of recall timeouts</td>
</tr>
<tr>
<td>BPPIO</td>
<td>QBSTPIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous read I/Os because of sequential prefetch</td>
</tr>
<tr>
<td>BPPFNOWKF</td>
<td>QBSTWKPD</td>
<td>YES</td>
<td>Integer</td>
<td>Prefetch abort - zero quantity</td>
</tr>
<tr>
<td>BP MAX</td>
<td>QBSTMAX</td>
<td>YES</td>
<td>Integer</td>
<td>Number of work files not created because of insufficient buffer resources</td>
</tr>
<tr>
<td>BMAXWKF</td>
<td>QBSTWF</td>
<td>YES</td>
<td>Integer</td>
<td>Maximum work files in merge</td>
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<tr>
<td>BPDISTREAD</td>
<td>QBSTWDRP</td>
<td>YES</td>
<td>Integer</td>
<td>Pages for destructive read</td>
</tr>
<tr>
<td>BPDEQVWQD</td>
<td>QBSTBVQ</td>
<td>YES</td>
<td>Integer</td>
<td>Dequeue from VDWQ for destructive read</td>
</tr>
<tr>
<td>BPMERGSPASS</td>
<td>QBSTWFR</td>
<td>YES</td>
<td>Integer</td>
<td>Number of merge passes</td>
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<tr>
<td>BPWKLMERG</td>
<td>QBSTWFT</td>
<td>YES</td>
<td>Integer</td>
<td>Total work files in merge</td>
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<tr>
<td>BPWKREJBUF</td>
<td>QBSTWFD</td>
<td>YES</td>
<td>Integer</td>
<td>Work files rejected/no buffer</td>
</tr>
<tr>
<td>BPMERGNBUF</td>
<td>QBSTWFF</td>
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<td>Integer</td>
<td>Merge passes with insufficient buffers</td>
</tr>
<tr>
<td>BPLISTPREF</td>
<td>QBSTLPF</td>
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<td>Integer</td>
<td>List prefetch requests</td>
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<tr>
<td>BPDPF</td>
<td>QBSTDPF</td>
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<td>Integer</td>
<td>Number of dynamic prefetch requests</td>
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<tr>
<td>BPVPA</td>
<td>QBSTVPA</td>
<td>YES</td>
<td>Integer</td>
<td>Number of successful virtual buffer pool expansions or contractions because of the ALTER BUFFERPOOL command</td>
</tr>
<tr>
<td>BPVPL</td>
<td>QBSTVPL</td>
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<td>Integer</td>
<td>Number of buffer allocated for a virtual buffer pool</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
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<td>-------------</td>
</tr>
<tr>
<td>BPDPP</td>
<td>QBSTDPP</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous page reads because of dynamic prefetch</td>
</tr>
<tr>
<td>BPLPP</td>
<td>QBSTLPP</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous page reads because of list prefetch</td>
</tr>
<tr>
<td>BPDIO</td>
<td>QBSTDIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous read I/Os because of dynamic prefetch</td>
</tr>
<tr>
<td>BPLIO</td>
<td>QBSTLIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous read I/Os because of list prefetch</td>
</tr>
<tr>
<td>BPSGT</td>
<td>QBSTSGT</td>
<td>YES</td>
<td>Integer</td>
<td>Number of GETPAGE requests issued by sequential access requesters</td>
</tr>
<tr>
<td>BPSIO</td>
<td>QBSTSIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of synchronous read I/Os issued by sequential access requesters</td>
</tr>
<tr>
<td>BPNGT</td>
<td>QBSTNGT</td>
<td>YES</td>
<td>Integer</td>
<td>Number of times conditional GETPAGE requests could not be satisfied for this buffer pool</td>
</tr>
<tr>
<td>BPXIS</td>
<td>QBSTXIS</td>
<td>YES</td>
<td>Integer</td>
<td>Highest number of concurrent prefetch I/O streams allocated for supporting queries processed in parallel in this buffer pool</td>
</tr>
<tr>
<td>BPJIS</td>
<td>QBSTJIS</td>
<td>YES</td>
<td>Integer</td>
<td>Number of requested prefetch I/O streams denied because of a storage shortage in the buffer pool</td>
</tr>
<tr>
<td>BPPQO</td>
<td>QBSTPQO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of requests made for processing queries in parallel in this buffer pool</td>
</tr>
<tr>
<td>BPPQF</td>
<td>QBSTPQF</td>
<td>YES</td>
<td>Integer</td>
<td>Number of times during this statistics interval DB2 could not allocate the requested number of buffer pages to allow a parallel group to run to the planned degree</td>
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<tr>
<td>BPPL1</td>
<td>QBSTPL1</td>
<td>YES</td>
<td>Integer</td>
<td>Number of occurrences when the prefetch quantity is reduced from normal to one-half of normal</td>
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<tr>
<td>BPPL2</td>
<td>QBSTPL2</td>
<td>YES</td>
<td>Integer</td>
<td>Number of occurrences when the prefetch quantity is reduced from one-half to one-quarter of normal</td>
</tr>
<tr>
<td>BPLPLADDS</td>
<td>QBSTLPL</td>
<td>NO</td>
<td>Integer</td>
<td>Number of times pages were added to LPL</td>
</tr>
<tr>
<td>BPCASTOUTIO</td>
<td>QBSTCIO</td>
<td>NO</td>
<td>Integer</td>
<td>Number of I/O on castout</td>
</tr>
<tr>
<td>BPUNLKCAST</td>
<td>QBSTPCO</td>
<td>NO</td>
<td>Integer</td>
<td>Number of pages on unlock castout</td>
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</table>

**Q9ST - Command Data**

<table>
<thead>
<tr>
<th>Command</th>
<th>SMF field name</th>
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<th>Field type</th>
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<tr>
<td>ACCESSDB</td>
<td>Q9STCTAD</td>
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<td>Number of ACCESS DB commands</td>
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**QWSD - IFC Checkpoint**

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<th>Field name</th>
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<th>Field type</th>
<th>Description</th>
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<td>CHECKPOINTS</td>
<td>QWSDCKPT</td>
<td>NO</td>
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<td>Number of checkpoints</td>
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<td>STATSREASON</td>
<td>QWSDRINV</td>
<td>NO</td>
<td>Integer</td>
<td>Reason to invoke statistics</td>
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<td>LOGHIGHRBA</td>
<td>QWSDLR</td>
<td>NO</td>
<td>Char(8)</td>
<td>High used log RBA</td>
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<tr>
<td>IFIABENDS</td>
<td>QWSDSCA</td>
<td>NO</td>
<td>Integer</td>
<td>IFI abends</td>
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<tr>
<td>IFIBADFUNC</td>
<td>QWSDSCU</td>
<td>NO</td>
<td>Integer</td>
<td>IFI unrecognized functions</td>
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<td>Integer</td>
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<td>DATACAPTLOGR</td>
<td>QWSCDCDLN</td>
<td>NO</td>
<td>Integer</td>
<td>Number of data capture log records retrieved</td>
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<td>DATACAPTRREAD</td>
<td>QWSCDCDLR</td>
<td>NO</td>
<td>Integer</td>
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<td>DATACAPTDESC</td>
<td>QWSDCDDDD</td>
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<td>Number of data capture data descriptions returned</td>
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<td>DATACAPTDPER</td>
<td>QWSDCDMDMB</td>
<td>NO</td>
<td>Integer</td>
<td>Number of data capture describes performed</td>
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<td>DATACAPTABLE</td>
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<td>NO</td>
<td>Integer</td>
<td>Number of data capture tables returned to caller</td>
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<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
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<td>Field type</td>
<td>Description</td>
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<td>NO</td>
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<td>Data capture data rows returned</td>
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<tr>
<td>ROLLARECTHRX</td>
<td>QWSDARTH</td>
<td>NO</td>
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<td>Number of rollup accounting records written because the rollup threshold was exceeded</td>
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<tr>
<td>ROLLARECSTOX</td>
<td>QWSDARSG</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rollup accounting records written because the rollup accounting storage threshold was exceeded</td>
</tr>
<tr>
<td>ROLLARECSTLX</td>
<td>QWSDARST</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rollup accounting records written because the rollup staleness threshold was exceeded</td>
</tr>
<tr>
<td>ROLLARECFTQ</td>
<td>QWSDARIR</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rollup accounting records failing to qualify for accounting rollup because all rollup key fields = NULL or NULL values are not permitted</td>
</tr>
</tbody>
</table>

**QVLS - Latch Manager**

| LATCHSTAT01 through LATCHSTAT32, LATCHSTAT254 | QVLSLC01 through QVLSLC32, QVLSLC254 | NO | Integer | Latch statistic counters 1 through 32, and 254 |

**QVAS - Agent Services**

| PHYSUSP | QVASSUSP | NO | Integer | Physical suspends |
| UNVRES  | QVASADUR | NO | Integer | Unavailable resources |
| ADEADLOCK | QVASADDL | NO | Integer | Allocation deadlocks |
| INVRESOURCE | QVASADIR | NO | Integer | Invalid resources |

**QSST - Storage Manager**

| SOSCONTRACT | QSSTCONT | NO | Integer | SOS storage contractions |
| SOSDETECT   | QSSTCRIT | NO | Integer | SOS detected |
| SOSABEND    | QSSTABND | NO | Integer | Abends issued due to SOS |

**QDST - Distributed Data Facility**

<p>| DBATINACTCUR | QDSTQCIT | NO | Integer | Current number of TYPE 1 inactive database access threads |
| DBATINACTMAX | QDSTQMIT | NO | Integer | Maximum number of TYPE 1 inactive database access threads that existed |
| DBATACTCUR   | QDSTCNAT | NO | Integer | Current number of active database access threads |
| DBATACTMAX   | QDSTHWAT | NO | Integer | Maximum number of active database access threads that existed |</p>
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
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<tr>
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<td>QDSTNITC</td>
<td>NO</td>
<td>Integer</td>
<td>Number of connections terminated because maximum number of TYPE 1 inactive threads was reached</td>
</tr>
<tr>
<td>CURTYPE2INACT</td>
<td>QDSTCIN2</td>
<td>NO</td>
<td>Integer</td>
<td>Current number of TYPE 2 inactive threads</td>
</tr>
<tr>
<td>MAXTYPE2INACT</td>
<td>QDSTMIN2</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum number of TYPE 2 inactive threads</td>
</tr>
<tr>
<td>TYPE2QD</td>
<td>QDSTQIN2</td>
<td>NO</td>
<td>Integer</td>
<td>Number of queued receive requests for a TYPE 2 inactive thread, plus the number of requests for new connections that were received after the maximum number of remote active threads was reached</td>
</tr>
<tr>
<td>CURTYPE2QD</td>
<td>QDSTNQR2</td>
<td>NO</td>
<td>Integer</td>
<td>Current number of TYPE 2 inactive threads that are queued waiting to process. This includes receive requests that completed for a TYPE 2 inactive thread and requests for new connections that were received after the maximum number of remote active threads was reached</td>
</tr>
<tr>
<td>MAXTYPE2QD</td>
<td>QDSTMQR2</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum number of TYPE 2 inactive threads that were queued waiting for a database access thread. This number includes both receive requests that were completed for a TYPE 2 inactive thread and requests for new connections that were received after the maximum number of remote active threads was reached</td>
</tr>
<tr>
<td>CURDBATFREE</td>
<td>QDSTNADS</td>
<td>NO</td>
<td>Integer</td>
<td>Current number of active database access thread slots that are not in use. A slot is assigned when a queued receive request is completed or a request for a new connection is received.</td>
</tr>
<tr>
<td>MAXDBATFREE</td>
<td>QDSTMADS</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum number of database access thread slots that were not in use because no processing was required to complete a queued receive request or to establish a new connection</td>
</tr>
<tr>
<td>CONCOLDSTART</td>
<td>QDSTCSTR</td>
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<td>Number of cold start connections with all remote locations</td>
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<tr>
<td>CONWARMSTART</td>
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<tr>
<td>RESYNATTEMPT</td>
<td>QDSTRSAT</td>
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<td>Number of resynchronization connections attempted with all remote locations</td>
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<tr>
<td>RESYNSUCCEED</td>
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<td>Integer</td>
<td>Number of resynchronization connections that succeeded with all remote locations</td>
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<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
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<td>CONVSDEALLOC</td>
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<td>Integer</td>
<td>Number of conversations deallocated because the ZPARM limit for the maximum connected remote threads was reached</td>
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<tr>
<td>DTHDQUED</td>
<td>QDSTQDBT</td>
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<td>Integer</td>
<td>DBAT queued count, because maximum number of active remote threads was reached</td>
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<td>DBATNEEDED</td>
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<td>Integer</td>
<td>Requests requiring DBATs</td>
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<td>DBATPOOL</td>
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<td>Requests assigned POOL threads</td>
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<td><strong>QBGL - Group Buffer Pool</strong></td>
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<tr>
<td>GBPREADINVBD</td>
<td>QBGLXD</td>
<td>NO</td>
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<td>Synchronous coupling facility reads caused by invalid buffer and with data returned</td>
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<tr>
<td>GBPREADINVBR</td>
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<td>NO</td>
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<td>Synchronous coupling facility reads caused by invalid buffer with no data returned and a directory entry created</td>
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<tr>
<td>GBPREADNOPGD</td>
<td>QBGLMD</td>
<td>NO</td>
<td>Integer</td>
<td>Synchronous coupling facility reads caused by page not in buffer pool and with data returned</td>
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<tr>
<td>GBPREADNOPGR</td>
<td>QBGLMR</td>
<td>NO</td>
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<td>Synchronous coupling facility reads caused by page not in buffer pool with no data returned and a directory entry created</td>
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<tr>
<td>GBPWRITECHG</td>
<td>QBGLSW</td>
<td>NO</td>
<td>Integer</td>
<td>Changed pages written synchronously to group buffer pool</td>
</tr>
<tr>
<td>GBPWRITCLEAN</td>
<td>QBGLWC</td>
<td>NO</td>
<td>Integer</td>
<td>Clean pages written synchronously to group buffer pool</td>
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<tr>
<td>GBPCASTCLASS</td>
<td>QBGLCT</td>
<td>NO</td>
<td>Integer</td>
<td>Group buffer pool castout because class threshold detected</td>
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<tr>
<td>GBPCASTGBP</td>
<td>QBGLGT</td>
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<td>Integer</td>
<td>Group buffer pool castout because group buffer pool threshold detected</td>
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<tr>
<td>GBPAWRITECHG</td>
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<td>Integer</td>
<td>Changed pages asynchronously written to group buffer pool</td>
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<td>GBPCASTOPS</td>
<td>QBGLRC</td>
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<td>GBPNOWRITE</td>
<td>QBGLWF</td>
<td>NO</td>
<td>Integer</td>
<td>Coupling facility write not complete</td>
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<td>GBPRDSTGST</td>
<td>QBGLOS</td>
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<td>Number of coupling facility requests to read storage statistics</td>
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<td>GBPCHKPT</td>
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<td>Integer</td>
<td>Number of group buffer pool checkpoints triggered by this member</td>
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<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
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<td>Number of coupling facility requests to unlock the castout lock on the pages</td>
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<tr>
<td>GBPRDCASTCL</td>
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<tr>
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<td>NO</td>
<td>Integer</td>
<td>Number of group buffer pool requests to delete all directory and data entries for a page set or partition</td>
</tr>
<tr>
<td>GBPRRDDIR</td>
<td>QBGLRD</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to read directory information</td>
</tr>
<tr>
<td>GBPREGPG</td>
<td>QBGLRG</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to register a page</td>
</tr>
<tr>
<td>GBPUNREGPG</td>
<td>QBGLDG</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to unregister a page</td>
</tr>
<tr>
<td>GBPREGPGGLST</td>
<td>QBGLAX</td>
<td>NO</td>
<td>Integer</td>
<td>Number of requests to register a page list in the coupling facility</td>
</tr>
<tr>
<td>GBPRETVCHP</td>
<td>QBGLAY</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility reads to retrieve a changed page from the group buffer pool as a result of feedback from the request to register a page list</td>
</tr>
<tr>
<td>GPPEXPLICITXI</td>
<td>QBGLEX</td>
<td>YES</td>
<td>Integer</td>
<td>Number of explicit cross-invalidations</td>
</tr>
<tr>
<td>GBPWRITSTG2</td>
<td>QBGL2F</td>
<td>YES</td>
<td>Integer</td>
<td>Number of coupling facility requests to write changed pages to the secondary group buffer pool for duplexing that failed due to a lack of storage in the coupling facility</td>
</tr>
<tr>
<td>GBPWRITCHK2</td>
<td>QBGL2S</td>
<td>NO</td>
<td>Integer</td>
<td>Number of completion checks for writes to the secondary GBP that were suspended because the write had not yet completed</td>
</tr>
<tr>
<td>GBPDELNMLST2</td>
<td>QBGL2D</td>
<td>YES</td>
<td>Integer</td>
<td>Number of group buffer pool requests to the secondary group buffer pool to delete a list of pages after they have been cast out from the primary group buffer pool</td>
</tr>
<tr>
<td>GBPRDCASTST2</td>
<td>QBGL2R</td>
<td>YES</td>
<td>Integer</td>
<td>Number of coupling facility requests to read the castout statistics for the secondary group buffer pool. Issued by group buffer pool structure owner to check for orphaned data entries in the secondary</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>GBPDELMN2</td>
<td>QBGL2N</td>
<td>YES</td>
<td>Integer</td>
<td>Number of group buffer pool requests to delete a page from the secondary group buffer pool. Issued by group buffer pool structure owner to delete orphaned data entries in the secondary as part of the garbage collection logic</td>
</tr>
<tr>
<td>GBPASYNPRIM</td>
<td>QBGLHS</td>
<td>NO</td>
<td>Integer</td>
<td>Asynchronous requests for primary GBP</td>
</tr>
<tr>
<td>GBPASYNSEC</td>
<td>QBGL2H</td>
<td>NO</td>
<td>Integer</td>
<td>Asynchronous requests for secondary GBP</td>
</tr>
<tr>
<td>GBPDEPGETPG</td>
<td>QBGLGG</td>
<td>NO</td>
<td>Integer</td>
<td>Getpages for GBP-dependent pages</td>
</tr>
<tr>
<td>GBPPKLSPMAP</td>
<td>QBGLP1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock requests for space map pages</td>
</tr>
<tr>
<td>GBPPKLDATA</td>
<td>QBGLP2</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock requests for data pages</td>
</tr>
<tr>
<td>GBPPKIDX</td>
<td>QBGLP3</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock requests for index leaf pages</td>
</tr>
<tr>
<td>GBPPKUNLK</td>
<td>QBGLU1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock unlock requests</td>
</tr>
<tr>
<td>GBPPSUSSMAP</td>
<td>QBGLS1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock suspensions for space map pages</td>
</tr>
<tr>
<td>GBPPSUSSDATA</td>
<td>QBGLS2</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock suspensions for data pages</td>
</tr>
<tr>
<td>GBPPSUSSIDX</td>
<td>QBGLS3</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock suspensions for index leaf pages</td>
</tr>
<tr>
<td>GBPPNEGSPMAP</td>
<td>QBGLN1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock negotiations for space map pages</td>
</tr>
<tr>
<td>GBPPNEGDATA</td>
<td>QBGLN2</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock negotiations for data pages</td>
</tr>
<tr>
<td>GBPPNEGIDX</td>
<td>QBGLN3</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock negotiations for index leaf pages</td>
</tr>
<tr>
<td>GBPWARMULTI</td>
<td>QBGLWM</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Write and Register Multiple (WARM) requests</td>
</tr>
<tr>
<td>GBPWAR</td>
<td>QBGLWS</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Write and Register (WAR) requests</td>
</tr>
<tr>
<td>GBPRFCOM</td>
<td>QBGLCM</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Read for Castout Multiple (RFCOM) requests</td>
</tr>
<tr>
<td>GBPRFCO</td>
<td>QBGLCR</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Read for Castout (RFCO) requests</td>
</tr>
<tr>
<td>GBPWWARM</td>
<td>QBGLWP</td>
<td>NO</td>
<td>Integer</td>
<td>Number of pages written using Write and Register Multiple (WARM) requests</td>
</tr>
<tr>
<td>QTGS - Global Locking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLPLOCKLK</td>
<td>QTGSLPLK</td>
<td>NO</td>
<td>Integer</td>
<td>Lock requests for P-locks</td>
</tr>
<tr>
<td>GLPLOCKCHG</td>
<td>QTGSCPLK</td>
<td>NO</td>
<td>Integer</td>
<td>Change requests for P-locks</td>
</tr>
<tr>
<td>GLPLOCKUNLK</td>
<td>QTGSUPLK</td>
<td>NO</td>
<td>Integer</td>
<td>Unlock requests for P-locks</td>
</tr>
<tr>
<td>GLXESSYNCLK</td>
<td>QTGSLSLM</td>
<td>NO</td>
<td>Integer</td>
<td>L-lock and P-lock lock requests propagated to MVS XES synchronously</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>GLXESSYNCCHG</td>
<td>QTGSCSLM</td>
<td>NO</td>
<td>Integer</td>
<td>L-lock and P-lock change requests propagated to MVS XES synchronously</td>
</tr>
<tr>
<td>GLXESSYNCUNLK</td>
<td>QTGSUSLM</td>
<td>NO</td>
<td>Integer</td>
<td>L-lock and P-lock unlock requests propagated to MVS XES synchronously</td>
</tr>
<tr>
<td>GLSUSPIRLM</td>
<td>QTGSIGLO</td>
<td>NO</td>
<td>Integer</td>
<td>Suspends caused by IRLM global resource contention</td>
</tr>
<tr>
<td>GLSUSPXES</td>
<td>QTGSGGLO</td>
<td>NO</td>
<td>Integer</td>
<td>Suspends caused by MVS XES global resource contention</td>
</tr>
<tr>
<td>GLSUSPFALSE</td>
<td>QTGSFLSE</td>
<td>NO</td>
<td>Integer</td>
<td>Suspends caused by false contentions encountered on this z/OS image plus the sync-to-async heuristic conversions (z/OS 1.2 and later). You can see suspends caused by false contentions alone in column GLFALSECONT.</td>
</tr>
<tr>
<td>GLINCOMPAT</td>
<td>QTGSDRTA</td>
<td>NO</td>
<td>Integer</td>
<td>Global lock or change requests denied for incompatible retained lock</td>
</tr>
<tr>
<td>GLNOTFYSENT</td>
<td>QTGSNTFY</td>
<td>NO</td>
<td>Integer</td>
<td>Notify messages sent</td>
</tr>
<tr>
<td>GLNOTFYRECVD</td>
<td>QTGSNTFR</td>
<td>NO</td>
<td>Integer</td>
<td>Notify messages received</td>
</tr>
<tr>
<td>GLIRLMXESASYN</td>
<td>QTGSKIDS</td>
<td>NO</td>
<td>Integer</td>
<td>Resources propagated by IRLM to MVS XES asynch</td>
</tr>
<tr>
<td>GLNEGPLOCKPP</td>
<td>QTGSPPPE</td>
<td>NO</td>
<td>Integer</td>
<td>Negotiate page set or partition because of changing inter-DB2 interest levels</td>
</tr>
<tr>
<td>GLNEGPLOCKPG</td>
<td>QTGSPGPE</td>
<td>NO</td>
<td>Integer</td>
<td>Negotiate page P-lock because of inter-DB2 contention</td>
</tr>
<tr>
<td>GLNEGPLOCKOT</td>
<td>QTGSOTPE</td>
<td>NO</td>
<td>Integer</td>
<td>Negotiate another P-lock type</td>
</tr>
<tr>
<td>GLNEGPLOCKCH</td>
<td>QTGSCNHP</td>
<td>NO</td>
<td>Integer</td>
<td>P-lock change requests during P-lock negotiation</td>
</tr>
<tr>
<td>GLEXITMAXENG</td>
<td>QTGSPEMX</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum engines available for P-lock exit or notify exit requests</td>
</tr>
<tr>
<td>GLENGUNAVAIL</td>
<td>QTGSPEQW</td>
<td>NO</td>
<td>Integer</td>
<td>Engine not available for P-lock exit or notify exit request</td>
</tr>
<tr>
<td>GLFALSECONT</td>
<td>QTGSFLMG</td>
<td>NO</td>
<td>Integer</td>
<td>Number of false contentions encountered on this z/OS image</td>
</tr>
<tr>
<td>GLCONDRJECTS</td>
<td>QTGSCREJ</td>
<td>NO</td>
<td>Integer</td>
<td>Number of conditional rejections by XES</td>
</tr>
</tbody>
</table>

### QWSB - Instrumentation Destination Data

<p>| SMFWRITEOK | QWSBSRSW of SMF | NO | Integer | SMF records written |</p>
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMFNOWRITE</td>
<td>QWSBSRNW of SMF</td>
<td>NO</td>
<td>Integer</td>
<td>SMF records not written</td>
</tr>
<tr>
<td>SMFBUFFERR</td>
<td>QWSBSBUF of SMF</td>
<td>NO</td>
<td>Smallint</td>
<td>SMF buffer errors</td>
</tr>
<tr>
<td>SMFNOTACTERR</td>
<td>QWSBSACT of SMF</td>
<td>NO</td>
<td>Smallint</td>
<td>SMF not active errors</td>
</tr>
<tr>
<td>SMFNOTACC</td>
<td>QWSBSRNA of SMF</td>
<td>NO</td>
<td>Smallint</td>
<td>SMF records not accepted</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>following this one (up to DMRAUTOLONG) in the create table member are not</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>used in the reports (NO in Used in Report column) and can be deleted as a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>group as a MainView customization option</td>
</tr>
<tr>
<td>SMFWRITEFAILS</td>
<td>QWSBSWF of SMF</td>
<td>NO</td>
<td>Smallint</td>
<td>SMF writer failures</td>
</tr>
<tr>
<td>GTFWRITEOK</td>
<td>QWSBSRSW of GTF</td>
<td>NO</td>
<td>Integer</td>
<td>GTF records written</td>
</tr>
<tr>
<td>OTHWRITEOK</td>
<td>QWSBSRSW of other</td>
<td>NO</td>
<td>Integer</td>
<td>Other records written</td>
</tr>
<tr>
<td><strong>QWSC - Instrumentation Data</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I12WRITEOK</td>
<td>QWSCSRSW of IFCID 1 or 2</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID 1 or 2 records written</td>
</tr>
<tr>
<td>I12NOWRITE</td>
<td>QWSCSRNW of IFCID 1 or 2</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID 1 or 2 records not written</td>
</tr>
<tr>
<td>I3WRITEOK</td>
<td>QWSCSRSW of IFCID 3</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID 3 records written</td>
</tr>
<tr>
<td>I3NOWRITE</td>
<td>QWSCSRNW of IFCID 3</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID 3 records not written</td>
</tr>
<tr>
<td>I4WRITEOK</td>
<td>QWSCSRSW of other IFCIDs</td>
<td>NO</td>
<td>Integer</td>
<td>Other IFCIDs written</td>
</tr>
<tr>
<td>I4NOWRITE</td>
<td>QWSCSRNW of other IFCIDs</td>
<td>NO</td>
<td>Integer</td>
<td>Other IFCIDs not written</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>following this one in the create table member are long name versions of the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>corresponding fields and can be deleted as a group as a MainView</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>customization option</td>
</tr>
</tbody>
</table>
DDF statistics table (DMRSTDF)

DDF statistics table (DMRSTDF) is an optional table for distributed statistics.

Each row in the DMRSTDF table represents information about one DDF location for one statistics interval. Table 146 on page 369 describes the DDF statistics.

**Note**

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.)

Alternatively, you can delete any unwanted columns individually before creating the table.

Table 146: DMRSTDF/DRMSDSUM statistics columns

<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM100SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>Subsystem</td>
<td>SM100SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID - name of DB2 subsystem</td>
</tr>
<tr>
<td>QWHS - Standard Header</td>
<td>QWHSRN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>QWHSSUBV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not yet defined.</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Interval for the summary accounting table</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>QWACPCNT</td>
<td>YES</td>
<td>Integer</td>
<td>Transaction thread count For summary tables, this field contains the number of transactions that were used to calculate the column values. <strong>Note:</strong> This value is 1 for each detail statistics record.</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>DateTIME</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date and time record was created</td>
</tr>
<tr>
<td>Date</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Date</td>
<td>Date record was created</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year record was created</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(2)</td>
<td>Month record was created</td>
</tr>
<tr>
<td>DAY</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(2)</td>
<td>Day record was created</td>
</tr>
<tr>
<td>Time</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Time</td>
<td>Time record was created</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(2)</td>
<td>Hour record was created</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
</tbody>
</table>

**QWHA - Data Sharing**

| GROUPNAME                      | QWHADSGN       | YES            | Char(8)    | Data sharing group name |
| MEMBERNAME                     | QWHAMEMN       | YES            | Char(8)    | Data sharing member name |

**QLST - Distributed Data Facility**

<p>| DDFLOCATION                    | QLSTLOCN       | YES            | Char(16)   | Name of the remote location |
| SQLSENT                        | QLSTSQLS       | YES            | Integer    | SQL statements sent |
| SQLRECV                        | QLSTSQLR       | YES            | Integer    | SQL statements received |
| RowsENT                        | QLSTROWS       | YES            | Integer    | Rows sent |
| ROWRECV                        | QLSTROWR       | YES            | Integer    | Rows received |
| BYTESENT                       | QLSTBYTS       | NO             | Integer    | Bytes sent |
| BYTERECSV                      | QLSTBYTR       | NO             | Integer    | Bytes received |
| CONVSENT                       | QLSTCNVS       | YES            | Integer    | Conversations initiated from this site |</p>
<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONVRECV</td>
<td>QLSTCNVR</td>
<td>YES</td>
<td>Integer</td>
<td>Conversations initiated to this site</td>
</tr>
<tr>
<td>MSGSSENT</td>
<td>QLSTMSGS</td>
<td>NO</td>
<td>Integer</td>
<td>Messages sent</td>
</tr>
<tr>
<td>MSGSRECV</td>
<td>QLSTMSGR</td>
<td>NO</td>
<td>Integer</td>
<td>Messages received</td>
</tr>
<tr>
<td>TRANSENT</td>
<td>QLSTTRNS</td>
<td>YES</td>
<td>Integer</td>
<td>Transactions migrated to remote</td>
</tr>
<tr>
<td>TRANRECV</td>
<td>QLSTTRNR</td>
<td>YES</td>
<td>Integer</td>
<td>Transactions migrated from remote</td>
</tr>
<tr>
<td>COMMITSENT</td>
<td>QLSTCOMS</td>
<td>NO</td>
<td>Integer</td>
<td>Commits sent</td>
</tr>
<tr>
<td>COMMITRECV</td>
<td>QLSTCOMR</td>
<td>NO</td>
<td>Integer</td>
<td>Commits received</td>
</tr>
<tr>
<td>ABORTSENT</td>
<td>QLSTABRS</td>
<td>NO</td>
<td>Integer</td>
<td>Rollbacks sent</td>
</tr>
<tr>
<td>ABORTRECV</td>
<td>QLSTABRR</td>
<td>NO</td>
<td>Integer</td>
<td>Rollbacks received</td>
</tr>
<tr>
<td>CONVQUED</td>
<td>QLSTCNVQ</td>
<td>YES</td>
<td>Integer</td>
<td>Conversation requests queued</td>
</tr>
<tr>
<td>SWLIMBLK</td>
<td>QLSTCBLB</td>
<td>NO</td>
<td>Integer</td>
<td>Switch to limited block protocol</td>
</tr>
<tr>
<td>SQLBOUND</td>
<td>QLSTBND</td>
<td>NO</td>
<td>Integer</td>
<td>SQL bound for remote access</td>
</tr>
<tr>
<td>RowsBUFF</td>
<td>QLSTBROW</td>
<td>NO</td>
<td>Integer</td>
<td>Number of rows in buffer</td>
</tr>
<tr>
<td>BLKSENT</td>
<td>QLSTBTBF</td>
<td>YES</td>
<td>Integer</td>
<td>Blocks sent using block fetch</td>
</tr>
<tr>
<td>BLKRECV</td>
<td>QLSTBRBF</td>
<td>YES</td>
<td>Integer</td>
<td>Blocks received using block fetch</td>
</tr>
<tr>
<td>PREPAREQSENT</td>
<td>QLSTPRSE</td>
<td>YES</td>
<td>Integer</td>
<td>Number of PREPARE requests sent to participant</td>
</tr>
<tr>
<td>PREPAREQSRREC</td>
<td>QLSTPRRC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of PREPARE requests received from coordinator</td>
</tr>
<tr>
<td>LASTAGNTSENT</td>
<td>QLSTLASE</td>
<td>YES</td>
<td>Integer</td>
<td>Number of LAST AGENT requests sent to coordinator</td>
</tr>
<tr>
<td>LASTAGENTREC</td>
<td>QLSTLARC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of LAST AGENT requests received from initiator</td>
</tr>
<tr>
<td>COMMITRQSENT</td>
<td>QLSTCRSE</td>
<td>YES</td>
<td>Integer</td>
<td>Number of COMMIT requests sent to participant</td>
</tr>
<tr>
<td>COMMITREQREC</td>
<td>QLSTCRRRC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of COMMIT requests received from coordinator</td>
</tr>
<tr>
<td>BACKOUTSENT</td>
<td>QLSTBKSE</td>
<td>YES</td>
<td>Integer</td>
<td>Number of BACKOUT requests sent to participant</td>
</tr>
<tr>
<td>BACKOUTRQREC</td>
<td>QLSTBKRC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of BACKOUT requests received from coordinator</td>
</tr>
<tr>
<td>FORGETRPSENT</td>
<td>QLSTRRESE</td>
<td>NO</td>
<td>Integer</td>
<td>Number of FORGET responses sent to coordinator</td>
</tr>
<tr>
<td>FORGETRESPREC</td>
<td>QLSTRRRC</td>
<td>NO</td>
<td>Integer</td>
<td>Number of FORGET responses received from participant</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>RQCOMMITSENT</td>
<td>QLSTVYSE</td>
<td>YES</td>
<td>Integer</td>
<td>Number of request COMMIT responses sent to coordinator</td>
</tr>
<tr>
<td>REQCOMMITREC</td>
<td>QLSTVYRC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of request COMMIT responses received from participant</td>
</tr>
<tr>
<td>BKOUTRSPSENT</td>
<td>QLSTVNSE</td>
<td>NO</td>
<td>Integer</td>
<td>Number of BACKOUT responses sent to coordinator</td>
</tr>
<tr>
<td>BKOUTRESPREC</td>
<td>QLSTVNRC</td>
<td>NO</td>
<td>Integer</td>
<td>Number of BACKOUT responses received from participant</td>
</tr>
<tr>
<td>INDOUBTREMCO</td>
<td>QLSTINDT</td>
<td>YES</td>
<td>Integer</td>
<td>Number of threads indoubt with remote location as coordinator</td>
</tr>
<tr>
<td>COMMITREMTCO</td>
<td>QLSTCPTR</td>
<td>YES</td>
<td>Integer</td>
<td>Number of COMMIT operations with remote location as coordinator</td>
</tr>
<tr>
<td>ROLLBKREMTCO</td>
<td>QLSTRBTR</td>
<td>YES</td>
<td>Integer</td>
<td>Number of ROLLBACK operations with remote location as coordinator</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>DDFLOCATION_L</td>
<td>QLSTLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the remote location</td>
</tr>
<tr>
<td>NBRCONVDEALLOC</td>
<td>QLSTCNVT</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of conversations deallocated</td>
</tr>
</tbody>
</table>

Storage address space statistics table (DMRSTADT)

The storage address space statistics table (DMRSTADT) is an optional table for storage address space statistics.
One storage address space record is created for each repeating section 1 of IFCID 225 and represents the storage usage of the DB2 address spaces DBM1 and DIST. For earlier DB2 versions, only one record for the DBM1 address space is created. Table 147 on page 373 describes the statistics.

**Table 147: DMRSTADT statistics columns**

<table>
<thead>
<tr>
<th>Performance report column name</th>
<th>SMF field name</th>
<th>Used in report</th>
<th>Field type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SystemID</td>
<td>SM100SID</td>
<td>NO</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM100SSI</td>
<td>NO</td>
<td>Char(4)</td>
<td>Subsystem ID - name of DB2 subsystem</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Char(26)</td>
<td>Date record created</td>
</tr>
<tr>
<td>DATE</td>
<td>None</td>
<td>NO</td>
<td>Char(10)</td>
<td>Date - subset of DATETIME</td>
</tr>
<tr>
<td>YEAR</td>
<td>None</td>
<td>NO</td>
<td>Char(4)</td>
<td>Year - subset of DATETIME</td>
</tr>
<tr>
<td>Month</td>
<td>None</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month - subset of DATETIME</td>
</tr>
<tr>
<td>DAY</td>
<td>None</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day - subset of DATETIME</td>
</tr>
<tr>
<td>TIME</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>Time - subset of DATETIME</td>
</tr>
<tr>
<td>HOUR</td>
<td>None</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour - subset of DATETIME</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Numeric day-of-week</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>None</td>
<td>NO</td>
<td>Char(3)</td>
<td>Day-of-week MON - SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Relative week number</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>MainView for DB2 version that created record</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>None</td>
<td>NO</td>
<td>Char(6)</td>
<td>DB2 version that created the record</td>
</tr>
<tr>
<td>STASLOCN</td>
<td>None</td>
<td>NO</td>
<td>Char(16)</td>
<td>Local location name</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Summation interval</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Number of transactions</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>Internal sequence number</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>ADDRSAPCE</td>
<td>QW0225AN</td>
<td>NO</td>
<td>Char(4)</td>
<td>Address space name</td>
</tr>
<tr>
<td>MVSEXTRREGNSIZE</td>
<td>QW0225RG</td>
<td>NO</td>
<td>Integer</td>
<td>MVS extended region size (maximum)</td>
</tr>
<tr>
<td>MVS24LOPRIVSTG</td>
<td>QW0225LO</td>
<td>NO</td>
<td>Integer</td>
<td>MVS 24-bit low private</td>
</tr>
<tr>
<td>MVS24HIPRIVSTG</td>
<td>QW0225HI</td>
<td>NO</td>
<td>Integer</td>
<td>MVS 24-bit high private</td>
</tr>
<tr>
<td>MVS31LOPRIVSTG</td>
<td>QW0225EL</td>
<td>NO</td>
<td>Integer</td>
<td>MVS 31-bit low private</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>MVS31HIPRIVSTG</td>
<td>QW0225EH</td>
<td>NO</td>
<td>Integer</td>
<td>MVS 31-bit high private</td>
</tr>
<tr>
<td>CURADDR24PRIV</td>
<td>QW0225TP</td>
<td>NO</td>
<td>Integer</td>
<td>Current high address of 24-bit private</td>
</tr>
<tr>
<td>CURADDR31PRIV</td>
<td>QW0225EP</td>
<td>NO</td>
<td>Integer</td>
<td>Current high address of 31-bit private</td>
</tr>
<tr>
<td>MUSCOMPRESVSTG</td>
<td>QW0225CR</td>
<td>NO</td>
<td>Integer</td>
<td>Storage reserved for operations that must be completed</td>
</tr>
<tr>
<td>AMTSTGMVSUSAGE</td>
<td>QW0225MV</td>
<td>NO</td>
<td>Integer</td>
<td>Amount of storage for MVS usage</td>
</tr>
<tr>
<td>STGCUSWARCONTR</td>
<td>QW0225SO</td>
<td>NO</td>
<td>Integer</td>
<td>Storage cushion warning to contract</td>
</tr>
<tr>
<td>TOTGETSTACKSTG</td>
<td>QW0225GS</td>
<td>NO</td>
<td>Integer</td>
<td>Total getmained stack storage</td>
</tr>
<tr>
<td>TOTSTKSTGINUSE</td>
<td>QW0225SU</td>
<td>NO</td>
<td>Integer</td>
<td>Total stack storage in use</td>
</tr>
<tr>
<td>TOTVARSTGBELOW</td>
<td>QW0225VR</td>
<td>NO</td>
<td>Integer</td>
<td>Total variable storage below the bar</td>
</tr>
<tr>
<td>TOTFIXBELOWSTG</td>
<td>QW0225FX</td>
<td>NO</td>
<td>Integer</td>
<td>Total fixed storage below the bar</td>
</tr>
<tr>
<td>TOTGETBELOWSTG</td>
<td>QW0225GM</td>
<td>NO</td>
<td>Integer</td>
<td>Total getmained storage below the bar</td>
</tr>
<tr>
<td>AMTAVAILSTG</td>
<td>QW0225AV</td>
<td>NO</td>
<td>Integer</td>
<td>Amount of available storage</td>
</tr>
<tr>
<td>TOTVARSTGABOVE</td>
<td>QW0225VA</td>
<td>NO</td>
<td>Bigint</td>
<td>Total variable storage above</td>
</tr>
<tr>
<td>TOTFIXSTGABOVE</td>
<td>QW0225FA</td>
<td>NO</td>
<td>Bigint</td>
<td>Total fixed storage above</td>
</tr>
<tr>
<td>TOTGETSTGABOVE</td>
<td>QW0225GA</td>
<td>NO</td>
<td>Bigint</td>
<td>Total getmained storage above</td>
</tr>
<tr>
<td>TOT64PRVSTGSMC</td>
<td>QW0225SM</td>
<td>NO</td>
<td>Bigint</td>
<td>Total high private storage for manager control</td>
</tr>
<tr>
<td>NBR4KRLFRMINUS</td>
<td>QW0225RL</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of real frames (4K) in use</td>
</tr>
<tr>
<td>NBR4KAUXSLTNUS</td>
<td>QW0225AX</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of auxiliary slots (4K) in use</td>
</tr>
<tr>
<td>TOTPIPMGRSPTSTG</td>
<td>QW0225PM</td>
<td>NO</td>
<td>Integer</td>
<td>Total pipe manager subpool storage</td>
</tr>
<tr>
<td>TOTRDSOPSTG</td>
<td>QW0225RO</td>
<td>NO</td>
<td>Integer</td>
<td>Total storage for RDS operations pool used</td>
</tr>
<tr>
<td>TOTSTMTCACHSTG</td>
<td>QW0225SB</td>
<td>NO</td>
<td>Integer</td>
<td>Total statement cache block storage</td>
</tr>
<tr>
<td>TOTINNTTRATBSTG</td>
<td>QW0225TT</td>
<td>NO</td>
<td>Integer</td>
<td>Storage used for Buffer Manager and Data Manager internal trace tables</td>
</tr>
<tr>
<td>TOTSJOPSTGABOV</td>
<td>QW0225SJ</td>
<td>NO</td>
<td>Integer</td>
<td>Total storage above the bar for star join operations</td>
</tr>
<tr>
<td>NBRHVPGAGESINREAL</td>
<td>QW0225HVPAG</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of real 64-bit 4K frames in use</td>
</tr>
<tr>
<td>NBRHVAUXSLOTS</td>
<td>QW0225HVAUXSLOTS</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 4K auxiliary slots in use for 64-bit private pools</td>
</tr>
<tr>
<td>HWMHVPGAGSINREAL</td>
<td>QW0225HVGPAGESINREAL</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark of real 64-bit 4K frames in use</td>
</tr>
<tr>
<td>Performance report column name</td>
<td>SMF field name</td>
<td>Used in report</td>
<td>Field type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>HWMHVAUXSLOTS</td>
<td>QW0225HVGAUXSLOTS</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark of 4K auxiliary slots in use for 64-bit private pools</td>
</tr>
<tr>
<td>PRISTG_REAL</td>
<td>QW0225PriStg_Rea</td>
<td>Bigint</td>
<td></td>
<td>Number of real 4KB frames in use for 64-bit private storage</td>
</tr>
<tr>
<td>PRISTG_AUX</td>
<td>QW0225PriStg_Aux</td>
<td>Bigint</td>
<td></td>
<td>Number of 4KB auxiliary slots in use for 64-bit private storage</td>
</tr>
</tbody>
</table>

**System storage statistics table (DMRSTSDT)**

The system storage statistics table (DMRSTSDT) is an optional table for system storage statistics.

One system storage record is created for each IFCID 225 and represents the following general DB2 storage information:

- Thread information
- Shared and common storage summary
- Statement cache and XPROC detail
- Pool details

Table 148 on page 375 describes the statistics.

**Table 148: DMRSTSDT statistics columns**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEMID</td>
<td>SM100SID</td>
<td>NO</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM100SSI</td>
<td>NO</td>
<td>Char(4)</td>
<td>Subsystem ID - name of DB2 subsystem</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Char(26)</td>
<td>Date record created</td>
</tr>
<tr>
<td>DATE</td>
<td>None</td>
<td>NO</td>
<td>Char(10)</td>
<td>Date - subset of DATETIME</td>
</tr>
<tr>
<td>YEAR</td>
<td>None</td>
<td>NO</td>
<td>Char(4)</td>
<td>Year - subset of DATETIME</td>
</tr>
<tr>
<td>MONTH</td>
<td>None</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month - subset of DATETIME</td>
</tr>
<tr>
<td>DAY</td>
<td>None</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day - subset of DATETIME</td>
</tr>
<tr>
<td>TIME</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>Time - subset of DATETIME</td>
</tr>
<tr>
<td>HOUR</td>
<td>None</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour - subset of DATETIME</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>None</td>
<td>NO</td>
<td>Char(3)</td>
<td>Day-of-week MON-SUN</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>WEEK#</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Relative week number</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>DMRVRSN</td>
<td>NO</td>
<td>Char(8)</td>
<td>MainView for DB2 version that created record</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Char(16)</td>
<td>Local location name</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>None</td>
<td>NO</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Summation interval</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>Number of transactions</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>Internal sequence number</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>NBRACTALLIEDTH</td>
<td>QW0225AT</td>
<td>NO</td>
<td>Integer</td>
<td>Number of active allied threads</td>
</tr>
<tr>
<td>NBRDISCONDBATS</td>
<td>QW0225DB</td>
<td>NO</td>
<td>Integer</td>
<td>Number of disconnected DBATs</td>
</tr>
<tr>
<td>NBRCASTOUTENGS</td>
<td>QW0225CE</td>
<td>NO</td>
<td>Integer</td>
<td>Number of castout engines</td>
</tr>
<tr>
<td>NBRDFRWRIENGS</td>
<td>QW0225DW</td>
<td>NO</td>
<td>Integer</td>
<td>Number of deferred write engines</td>
</tr>
<tr>
<td>NBRGBPWRWIENGS</td>
<td>QW0225GW</td>
<td>NO</td>
<td>Integer</td>
<td>Number of group buffer pool write engines</td>
</tr>
<tr>
<td>NBRPREFENGS</td>
<td>QW0225PF</td>
<td>NO</td>
<td>Integer</td>
<td>Number of prefetch engines</td>
</tr>
<tr>
<td>NBRPLNFYEXENGS</td>
<td>QW0225PL</td>
<td>NO</td>
<td>Integer</td>
<td>Number of p-lock and notify exit engines</td>
</tr>
<tr>
<td>NBRSHR4KFRAMINUS</td>
<td>QW0225ShrStg_Real</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of real 4KB frames that are being used for 64-bit shared storage</td>
</tr>
<tr>
<td>NBRSHR4KSLTSINUS</td>
<td>QW0225ShrStg_Aux</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 4KB auxiliary slots that are being used for 64-bit shared storage</td>
</tr>
<tr>
<td>NBRSHR4KSTKRLIUS</td>
<td>QW0225ShrStkStg_Real</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of real 4KB frames that are being used for 64-bit shared stack storage</td>
</tr>
<tr>
<td>NBRSHR4KSTKAXIUS</td>
<td>QW0225ShrStkStg_Aux</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 4KB auxiliary slots that are being used for 64-bit shared stack storage</td>
</tr>
<tr>
<td>NBRCOM4K64FRMIUS</td>
<td>QW0225ComStg_Real</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of real 4KB frames that are being used for 64-bit common storage</td>
</tr>
<tr>
<td>NBRCOM4K64AUXIUS</td>
<td>QW0225ComStg_Aux</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 4KB auxiliary slots that are being used for 64-bit common storage</td>
</tr>
<tr>
<td>MVSEXTCSASIZE</td>
<td>QW0225EC</td>
<td>NO</td>
<td>Integer</td>
<td>MVS extended CSA size</td>
</tr>
<tr>
<td>TOT31COMFIXPLSTG</td>
<td>QW0225FC</td>
<td>NO</td>
<td>Integer</td>
<td>Total 31-bit common fixed pool storage</td>
</tr>
<tr>
<td>TOT31COMVARPLSTG</td>
<td>QW0225VC</td>
<td>NO</td>
<td>Integer</td>
<td>Total 31-bit common variable pool storage</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>TOT31COMGETPLSTG</td>
<td>QW0225GC</td>
<td>NO</td>
<td>Integer</td>
<td>Total 31-bit common getmained storage</td>
</tr>
<tr>
<td>TOT64COMFIXPLSTG</td>
<td>QW0225FCG</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 31-bit common variable pool storage</td>
</tr>
<tr>
<td>TOT64COMVARPLSTG</td>
<td>QW0225VCG</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit common variable pool storage</td>
</tr>
<tr>
<td>TOT64COMGETPLSTG</td>
<td>QW0225GCG</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit common getmained storage</td>
</tr>
<tr>
<td>TOT64COMSMCTLSTG</td>
<td>QW0225SMC</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit common storage for storage manager control structures</td>
</tr>
<tr>
<td>TOTVARSTG64SHR</td>
<td>QW0225SV</td>
<td>NO</td>
<td>Bigint</td>
<td>Total variable virtual 64-bit shared</td>
</tr>
<tr>
<td>TOTFIXSTG64SHR</td>
<td>QW0225SF</td>
<td>NO</td>
<td>Bigint</td>
<td>Total fixed virtual 64-bit shared</td>
</tr>
<tr>
<td>TOTGETSTG64SHR</td>
<td>QW0225SG</td>
<td>NO</td>
<td>Bigint</td>
<td>Total getmained virtual 64-bit shared</td>
</tr>
<tr>
<td>TOT64SHRSMCTLSTG</td>
<td>QW0225SMS</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit shared storage for storage manager control structures</td>
</tr>
<tr>
<td>TOT64SHRSYSSTK</td>
<td>QW0225GSG_SYS</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit shared system agent stack</td>
</tr>
<tr>
<td>TOT64SHRSYSTUSE</td>
<td>QW0225SUG_SYS</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit shared system agent stack in use</td>
</tr>
<tr>
<td>TOT64SNONSYSSST</td>
<td>QW0225GSG</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit shared non-system agent stack</td>
</tr>
<tr>
<td>TOT64SNONSYSTKUS</td>
<td>QW0225SUG</td>
<td>NO</td>
<td>Bigint</td>
<td>Total 64-bit shared non-system agent stack in use</td>
</tr>
<tr>
<td>NBRSHRMEMOBJJS</td>
<td>QW0225SHRNOMB</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of shared memory objects on LPAR</td>
</tr>
<tr>
<td>NBRSHRMEMPAGES</td>
<td>QW0225SHRPAGES</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 64-bit shared memory pages</td>
</tr>
<tr>
<td>HWMSHRGBYTES</td>
<td>QW0225SHRGBYTES</td>
<td>NO</td>
<td>Bigint</td>
<td>High water mark for number of 64-bit shared bytes for this LPAR</td>
</tr>
<tr>
<td>NBRSHRPGBKDREAL</td>
<td>QW0225SHRINREAL</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 64-bit shared pages backed in real storage on this LPAR</td>
</tr>
<tr>
<td>NBRSHRAUXSLO</td>
<td>QW0225SHRAUXSLOTS</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of auxiliary slots used for 64-bit storage for this LPAR</td>
</tr>
<tr>
<td>NBRSHRPAGEINS</td>
<td>QW0225SHRPAGEINS</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 64-bit shared pages paged in from auxiliary for this LPAR</td>
</tr>
<tr>
<td>NBRSHRPAGEOU</td>
<td>QW0225SHRPAGEOUTS</td>
<td>NO</td>
<td>Bigint</td>
<td>Number of 64-bit shared pages paged out to auxiliary on this LPAR</td>
</tr>
<tr>
<td>TOTSTGTHCOPIES</td>
<td>QW0225SC</td>
<td>NO</td>
<td>Integer</td>
<td>Total storage for thread copies</td>
</tr>
<tr>
<td>ALCSTGTHDCOPS</td>
<td>QW0225LS</td>
<td>NO</td>
<td>Integer</td>
<td>Allocated storage for thread copies</td>
</tr>
<tr>
<td>TOT31PROCSTG</td>
<td>QW0225SX</td>
<td>NO</td>
<td>Integer</td>
<td>Total 31-bit XPROC storage for static SQL</td>
</tr>
<tr>
<td>HWMSSTGTHDCOPS</td>
<td>QW0225HS</td>
<td>NO</td>
<td>Integer</td>
<td>High water mark of allocated storage for thread copies</td>
</tr>
</tbody>
</table>
### Pool detail buffer statistics table (DMRSBFDT)

The pool detail buffer statistics table (DMRSBFDT) is an optional table for detailed statistics per buffer pool.

One statistics record is created from each pair of SMF 100 records. This record is further processed to create a delta record, showing the changes in values during this statistics interval. Each row in the table represents buffer statistics for one pool for one statistics interval within DB2. Table 149 on page 379 describes the DMRSBFDT table.
Note

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

**Table 149: DMRSBFDT/DMRSBSUM columns**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td></td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td></td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM100SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM100SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID - name of DB2 subsystem</td>
</tr>
</tbody>
</table>

**QWHS - Standard Header**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN QWHSSUBV</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 prior to 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Interval for the summary accounting table</td>
</tr>
</tbody>
</table>
| TRANSCNT                      | QWACPCNT for rollup records, otherwise, see description | YES | Integer | Transaction thread count For summary tables, this field contains the number of transactions that were used to calculate the column values.  
**Note:** This value is 1 for each detail statistics record. |
<p>| IFCIDSEQ#                     | QWHSISEQ      | NO             | Integer    | IFCID sequence number |
| DATETIME                      | QWHSSTCK      | YES            | time stamp | Date and time record was created |
| DATE                          | QWHSSTCK      | YES            | date       | Date record was created |
| YEAR                          | QWHSSTCK      | YES            | Char(4)    | Year record was created |
| MONTH                         | QWHSSTCK      | YES            | Char(2)    | Month record was created |
| DAY                           | QWHSSTCK      | YES            | Char(2)    | Day record was created |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>time</td>
<td>Time record was created</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(2)</td>
<td>Hour record was created</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWHSSTCK</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
</tbody>
</table>

**QWHA - Data Sharing**

- **GROUPNAME**
  
  QWHADSGN | YES | Char(8) | Data sharing group name

- **MEMBERNAME**

  QWHAMEMN | YES | Char(8) | Data sharing member name

**QBST - Buffer Manager**

- **BPNAME**
  
  QBSTPID | NO | Char(6) | BP0 - BP32K9 character format buffer pool ID

- **BPGETPAGE**
  
  QBSTGET | YES | Integer | Number of GETPAGES

- **BPREADS**
  
  QBSTRIO | YES | Integer | Synchronous read I/O

- **BPDWV**
  
  QBSTDWV | YES | Integer | Number of times the vertical deferred write threshold was reached

- **BPFAILMAX**
  
  QBSTXFL | YES | Integer | Expansions failed - pool was full

- **BPFAILSOS**
  
  QBSTXFV | YES | Integer | Expansions failed - GETMAIN

- **BPGUPDAT**
  
  QBSTSWS | YES | Integer | Number of page update requests

- **BPGWRITN**
  
  QBSTPWS | YES | Integer | Pages written

- **BPSYNCCWR**
  
  QBSTWIO | YES | Integer | Asynchronous writes

- **BPACTBUFF**
  
  QBSTCBA | YES | Integer | Current active buffers

- **BPPAGEINRD**
  
  QBSTRPI | YES | Integer | Pageins for read I/O

- **BPPAGEINWR**
  
  QBSTWPI | YES | Integer | Pageins for write I/O

- **BPOPENSOK**
  
  QBSTDSO | NO | Integer | Number of successful opens

- **BPSYNCCWR**
  
  QBSTIMW | YES | Integer | Immediate (synchronous) write I/O

- **BPPFREQS**
  
  QBSTSEQ | YES | Integer | Number of sequential prefetch requests

- **BPPAGESRD**
  
  QBSTSP | YES | Integer | Fetch pages read

- **BPPFNOBFR**
  
  QBSTSPD | YES | Integer | Prefetch disabled - no buffers

- **BPPFNORDN**
  
  QBSTREE | YES | Integer | Prefetch disabled - no read engine

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*MainView for DB2 Performance Reporter User Guide*
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPDEFWRITE</td>
<td>QBSTDWT</td>
<td>YES</td>
<td>Integer</td>
<td>Times deferred write threshold reached</td>
</tr>
<tr>
<td>BPUNLKCAST</td>
<td>QBSTPCO</td>
<td>NO</td>
<td>Integer</td>
<td>Number of pages on unlock castout</td>
</tr>
<tr>
<td>BPCASTOUTIO</td>
<td>QBSTCIO</td>
<td>NO</td>
<td>Integer</td>
<td>Number of I/O on castout</td>
</tr>
<tr>
<td>BPDMCRITIC</td>
<td>QBSTDMC</td>
<td>YES</td>
<td>Integer</td>
<td>Number of times the Data Management critical threshold reached</td>
</tr>
<tr>
<td>BPMIGDS</td>
<td>QBSTMIG</td>
<td>YES</td>
<td>Integer</td>
<td>Migrated data sets encountered</td>
</tr>
<tr>
<td>BPRTO</td>
<td>QBSTRTO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of recall timeouts</td>
</tr>
<tr>
<td>BPPIO</td>
<td>QBSTPIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous read I/Os because of sequential prefetch</td>
</tr>
<tr>
<td>BPPFNOWKF</td>
<td>QBSTWKPD</td>
<td>YES</td>
<td>Integer</td>
<td>Prefetch abort - zero quantity</td>
</tr>
<tr>
<td>BPMAX</td>
<td>QBSTMAX</td>
<td>YES</td>
<td>Integer</td>
<td>Number of work files not created because of insufficient buffer resources</td>
</tr>
<tr>
<td>BMAXWKFIL</td>
<td>QBSTWFM</td>
<td>YES</td>
<td>Integer</td>
<td>Maximum work files in merge</td>
</tr>
<tr>
<td>BDISTREAD</td>
<td>QBSTWDRP</td>
<td>YES</td>
<td>Integer</td>
<td>Pages for destructive read</td>
</tr>
<tr>
<td>BDEQVDWQD</td>
<td>QBSTWBVQ</td>
<td>YES</td>
<td>Integer</td>
<td>Dequeue from VDWQ for destructive read</td>
</tr>
<tr>
<td>BPMERGPASS</td>
<td>QBSTWFR</td>
<td>YES</td>
<td>Integer</td>
<td>Number of merge passes</td>
</tr>
<tr>
<td>BPWKFLMERG</td>
<td>QBSTWFT</td>
<td>YES</td>
<td>Integer</td>
<td>Total work files in merge</td>
</tr>
<tr>
<td>BPWKREJBUF</td>
<td>QBSTWFD</td>
<td>YES</td>
<td>Integer</td>
<td>Work files rejected / no buffer</td>
</tr>
<tr>
<td>BPMERGNBUF</td>
<td>QBSTWFF</td>
<td>YES</td>
<td>Integer</td>
<td>Merge passes with insufficient buffers</td>
</tr>
<tr>
<td>BPLISTPREF</td>
<td>QBSTLPF</td>
<td>YES</td>
<td>Integer</td>
<td>List prefetch requests</td>
</tr>
<tr>
<td>BDPPF</td>
<td>QBSTDPP</td>
<td>YES</td>
<td>Integer</td>
<td>Number of dynamic prefetch requests</td>
</tr>
<tr>
<td>BPVPA</td>
<td>QBSTVPA</td>
<td>YES</td>
<td>Integer</td>
<td>Number of successful virtual buffer pool expansions or contractions because of the ALTER BUFFERPOOL command</td>
</tr>
<tr>
<td>BPVPL</td>
<td>QBSTVPL</td>
<td>YES</td>
<td>Integer</td>
<td>Number of buffer pools allocated for a virtual buffer pool</td>
</tr>
<tr>
<td>BPDPP</td>
<td>QBSTDPP</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous page reads because of dynamic prefetch</td>
</tr>
<tr>
<td>BPLPP</td>
<td>QBSTLPP</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous page reads because of list prefetch</td>
</tr>
<tr>
<td>BPDIO</td>
<td>QBSTDIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous read I/Os because of dynamic prefetch</td>
</tr>
<tr>
<td>BPLIO</td>
<td>QBSTLIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of asynchronous read I/Os because of list prefetch</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>BPSGT</td>
<td>QBSTSGT</td>
<td>YES</td>
<td>Integer</td>
<td>Number of GETPAGE requests issued by sequential access requesters</td>
</tr>
<tr>
<td>BPSIO</td>
<td>QBSTSIO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of synchronous read I/Os issued by sequential access requesters</td>
</tr>
<tr>
<td>BPNGT</td>
<td>QBSTNGT</td>
<td>YES</td>
<td>Integer</td>
<td>Number of times conditional GETPAGE requests could not be satisfied for this buffer pool</td>
</tr>
<tr>
<td>BPXIS</td>
<td>QBSTXIS</td>
<td>YES</td>
<td>Integer</td>
<td>Highest number of concurrent prefetch I/O streams allocated for supporting queries processed in parallel in this buffer pool</td>
</tr>
<tr>
<td>BPJIS</td>
<td>QBSTJIS</td>
<td>YES</td>
<td>Integer</td>
<td>Number of requested prefetch I/O streams denied because of a storage shortage in the buffer pool</td>
</tr>
<tr>
<td>BPPQO</td>
<td>QBSTPQO</td>
<td>YES</td>
<td>Integer</td>
<td>Number of requests made for processing queries in parallel in this buffer pool</td>
</tr>
<tr>
<td>BPPQF</td>
<td>QBSTPQF</td>
<td>YES</td>
<td>Integer</td>
<td>Number of times during this statistics interval DB2 could not allocate the requested number of buffer pages to allow a parallel group to run to the planned degree</td>
</tr>
<tr>
<td>BPPL1</td>
<td>QBSTPL1</td>
<td>YES</td>
<td>Integer</td>
<td>Number of occurrences when the prefetch quantity is reduced from normal to one-half of normal</td>
</tr>
<tr>
<td>BPPL2</td>
<td>QBSTPL2</td>
<td>YES</td>
<td>Integer</td>
<td>Number of occurrences when the prefetch quantity is reduced from one-half to one-quarter of normal</td>
</tr>
<tr>
<td>BPLPLADDS</td>
<td>QBSTLPL</td>
<td>NO</td>
<td>Integer</td>
<td>Number of times pages added to LPL</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
</tbody>
</table>

**QBGL - Group Buffer Pool**

<table>
<thead>
<tr>
<th>QBGL - Group Buffer Pool</th>
<th>Buffer pool ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPOOLID</td>
<td>QBGLGN</td>
</tr>
<tr>
<td>GBPREADINVBD</td>
<td>QBGLXD</td>
</tr>
<tr>
<td>GBPREADINVBR</td>
<td>QBGLXR</td>
</tr>
<tr>
<td>GBPREADNOPGD</td>
<td>QBGLMD</td>
</tr>
</tbody>
</table>

- **BPOOLID**: Buffer pool ID
- **GBPREADINVBD**: Synchronous coupling facility reads caused by invalid buffer and with data returned
- **GBPREADINVBR**: Synchronous coupling facility reads caused by invalid buffer with no data returned and a directory entry created
- **GBPREADNOPGD**: Synchronous coupling facility reads caused by page not in buffer pool and with data returned
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBPREADNOPGR</td>
<td>QBGLMR</td>
<td>NO</td>
<td>Integer</td>
<td>Synchronous coupling facility reads caused by page not in buffer pool with no data returned and a directory entry created</td>
</tr>
<tr>
<td>GBPWRITECHG</td>
<td>QBGLSW</td>
<td>NO</td>
<td>Integer</td>
<td>Changed pages written synchronously to group buffer pool</td>
</tr>
<tr>
<td>GBPWRITECLEAN</td>
<td>QBGLWC</td>
<td>NO</td>
<td>Integer</td>
<td>Clean pages written synchronously to group buffer pool</td>
</tr>
<tr>
<td>GBPCASTCLASS</td>
<td>QBGLCT</td>
<td>NO</td>
<td>Integer</td>
<td>Group buffer pool castout because class threshold detected</td>
</tr>
<tr>
<td>GBPCASTGBP</td>
<td>QBGLGT</td>
<td>NO</td>
<td>Integer</td>
<td>Group buffer pool castout because group buffer pool threshold detected.</td>
</tr>
<tr>
<td>GBPWRITECHG</td>
<td>QBGLAW</td>
<td>NO</td>
<td>Integer</td>
<td>Changed pages asynchronously written to group buffer pool</td>
</tr>
<tr>
<td>GBPWRITECLEAN</td>
<td>QBGLAC</td>
<td>NO</td>
<td>Integer</td>
<td>Clean pages asynchronously written to group buffer pool</td>
</tr>
<tr>
<td>GBPCASTOPS</td>
<td>QBGLRC</td>
<td>NO</td>
<td>Integer</td>
<td>Castout operations performed</td>
</tr>
<tr>
<td>GBNOWRITE</td>
<td>QBGLWF</td>
<td>NO</td>
<td>Integer</td>
<td>Coupling facility write not complete</td>
</tr>
<tr>
<td>GBPREADSTGST</td>
<td>QBGLOS</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to read storage statistics</td>
</tr>
<tr>
<td>GBPCHKPT</td>
<td>QBGLCK</td>
<td>NO</td>
<td>Integer</td>
<td>Number of group buffer pool checkpoints triggered by this member</td>
</tr>
<tr>
<td>GBPUNLKCAST</td>
<td>QBGLUN</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to unlock the castout lock on the pages</td>
</tr>
<tr>
<td>GBPREADCASTCL</td>
<td>QBGLCC</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to read the castout class</td>
</tr>
<tr>
<td>GBPREADCASTST</td>
<td>QBGLCS</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to read the castout statistics</td>
</tr>
<tr>
<td>GBPDELETE</td>
<td>QBGLDN</td>
<td>NO</td>
<td>Integer</td>
<td>Number of group buffer pool requests to delete all directory and data entries for a page set or partition</td>
</tr>
<tr>
<td>GBPREADDIR</td>
<td>QBGLRD</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to read directory information</td>
</tr>
<tr>
<td>GBPREGPG</td>
<td>QBGLRG</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to register a page</td>
</tr>
<tr>
<td>GBPUNREGPG</td>
<td>QBGLDG</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to unregister a page</td>
</tr>
<tr>
<td>GBPREGPGLST</td>
<td>QBGLAX</td>
<td>NO</td>
<td>Integer</td>
<td>Number of requests to register a page list in the coupling facility</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>GBPRETVCHP</td>
<td>QBGLAY</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility reads to retrieve a changed page from the group buffer pool as a result of feedback from the request to register a page list</td>
</tr>
<tr>
<td>GBPEXPLICITXI</td>
<td>QBGLEX</td>
<td>NO</td>
<td>Integer</td>
<td>Number of explicit cross-invalidations</td>
</tr>
<tr>
<td>GBPWRITSTG2</td>
<td>QBGL2F</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to write changed pages to the secondary group buffer pool for duplexing that failed due to a lack of storage in the coupling facility</td>
</tr>
<tr>
<td>GBPWRITCHK2</td>
<td>QBGL2S</td>
<td>NO</td>
<td>Integer</td>
<td>Number of completion checks for writes to the secondary GBP that were suspended because the write had not yet completed processing</td>
</tr>
<tr>
<td>GBPDELNMLST2</td>
<td>QBGL2D</td>
<td>NO</td>
<td>Integer</td>
<td>Number of group buffer pool requests to the secondary group buffer pool to delete a list of pages after they have been castout from the primary group buffer pool</td>
</tr>
<tr>
<td>GBPRDCASTST2</td>
<td>QBGL2R</td>
<td>NO</td>
<td>Integer</td>
<td>Number of coupling facility requests to read the castout statistics for the secondary group buffer pool. Issued by group buffer pool structure owner to check for orphaned data entries in the secondary</td>
</tr>
<tr>
<td>GBPDELNM2</td>
<td>QBGL2N</td>
<td>NO</td>
<td>Integer</td>
<td>Number of group buffer pool requests to delete a page from the secondary group buffer pool. Issued by group buffer pool structure owner to delete orphaned data entries in the secondary as part of the garbage collection logic</td>
</tr>
<tr>
<td>GBPASYNPRIM</td>
<td>QBGLHS</td>
<td>NO</td>
<td>Integer</td>
<td>Asynchronous requests for primary GBP</td>
</tr>
<tr>
<td>GBPASYNSEC</td>
<td>QBGL2H</td>
<td>NO</td>
<td>Integer</td>
<td>Asynchronous requests for secondary GBP</td>
</tr>
<tr>
<td>GBPDEPGETPG</td>
<td>QBGLGG</td>
<td>NO</td>
<td>Integer</td>
<td>Getpages for GBP-dependent pages</td>
</tr>
<tr>
<td>GBPPPLKSPMAP</td>
<td>QBGPLP1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock requests for space map pages</td>
</tr>
<tr>
<td>GBPPPLKDATA</td>
<td>QBGPL2</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock requests for data pages</td>
</tr>
<tr>
<td>GBPPPLKIDX</td>
<td>QBGPL3</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock requests for index leaf pages</td>
</tr>
<tr>
<td>GBPPPLKUNLK</td>
<td>QBGLU1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock unlock requests</td>
</tr>
<tr>
<td>GBPPSUSSPMAP</td>
<td>QBGLS1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock suspensions for space map pages</td>
</tr>
<tr>
<td>GBPPSUSDATA</td>
<td>QBGLS2</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock suspensions for data pages</td>
</tr>
<tr>
<td>GBPPSUSIDX</td>
<td>QBGLS3</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock suspensions for index leaf pages</td>
</tr>
<tr>
<td>GBPPNEGSPMAP</td>
<td>QBGLN1</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock negotiations for space map pages</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>GBPPNEGDATA</td>
<td>QBGLN2</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock negotiations for data pages</td>
</tr>
<tr>
<td>GBPPNEGIDX</td>
<td>QBGLN3</td>
<td>NO</td>
<td>Integer</td>
<td>Page P-lock negotiations for index leaf pages</td>
</tr>
<tr>
<td>GBPWARMULTI</td>
<td>QBGLWM</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Write And Register Multiple (WARM) requests</td>
</tr>
<tr>
<td>GBPWAR</td>
<td>QBGLWS</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Write And Register (WAR) requests</td>
</tr>
<tr>
<td>GBPRFCOM</td>
<td>QBGLCM</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Read for Castout Multiple (RFCOM) requests</td>
</tr>
<tr>
<td>GBPRFCO</td>
<td>QBGLCR</td>
<td>NO</td>
<td>Integer</td>
<td>Number of Read for Castout (RFCO) requests</td>
</tr>
<tr>
<td>GBPWWARM</td>
<td>QBGLWP</td>
<td>NO</td>
<td>Integer</td>
<td>Number of pages written using Write and Register Multiple (WARM) requests</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
</tbody>
</table>

**Statistics Accelerator detail and summary table (DMRSXxxx)**

One accounting record is created from each SMF 101 record that is received.
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

### Table 150: DMRSXDTL/DMRSXSUM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>Char (8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>Char (8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM101SID</td>
<td>Char (4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM101SSI</td>
<td>Char (4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
</tbody>
</table>

**QWHS - Standard Header**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>Char (6)</td>
<td>Version of DB2 that created the record</td>
</tr>
<tr>
<td></td>
<td>QWHSSUBV</td>
<td></td>
<td>For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>Integer</td>
<td>Interval for the summary accounting table</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>QWACPCNT for rollup records, otherwise, see description</td>
<td>Integer</td>
<td>Transaction thread count For summary tables, this field contains the number of transactions that were used to calculate the column values. <strong>Note:</strong> This value is 1 for each detail statistics record.</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWHSSTCK</td>
<td>Char (4)</td>
<td>Year record was created</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>Char (16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
</tbody>
</table>

**QWAC - Accounting Record Instrumentation**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>Time stamp</td>
<td>Date and time record was created</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>Date</td>
<td>Date record was created</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>Char (2)</td>
<td>Month record was created</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>Char (2)</td>
<td>Day record was created</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>Time</td>
<td>Time record was created</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>Char (2)</td>
<td>Hour record was created</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>Smallint</td>
<td>Relative da of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>Char (3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
</tbody>
</table>

**QWHA - Data Sharing**

<table>
<thead>
<tr>
<th>GROUPNAME</th>
<th>QWHADSGN</th>
<th>Char (8)</th>
<th>Data sharing group name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>Char (8)</td>
<td>Data sharing member name</td>
</tr>
</tbody>
</table>

**Q8ST - Statistics Accelerator**

<table>
<thead>
<tr>
<th>PRODUCTID</th>
<th>Q8STPRID</th>
<th>Char (8)</th>
<th>Accelerator product ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECTS</td>
<td>Q8STCONN</td>
<td>BIGINT</td>
<td>Number of Accelerator connects</td>
</tr>
<tr>
<td>REQUESTS</td>
<td>Q8STREQ</td>
<td>BIGINT</td>
<td>Number of Accelerator requests</td>
</tr>
<tr>
<td>REQUEST_TIMEOUTS</td>
<td>Q8STTOUT</td>
<td>BIGINT</td>
<td>Number of Accelerator request timeouts</td>
</tr>
<tr>
<td>FAILED_REQUESTS</td>
<td>Q8STFAIL</td>
<td>BIGINT</td>
<td>Number of Accelerator failed requests</td>
</tr>
<tr>
<td>BYTES_SENT</td>
<td>Q8STBYTS</td>
<td>BIGINT</td>
<td>Number of bytes sent</td>
</tr>
<tr>
<td>BYTES_RETURNED</td>
<td>Q8STBYTR</td>
<td>BIGINT</td>
<td>Number of bytes returned</td>
</tr>
<tr>
<td>MSGS_SENT</td>
<td>Q8STMSGS</td>
<td>BIGINT</td>
<td>Number of messages sent</td>
</tr>
<tr>
<td>MSGS_RETURNED</td>
<td>Q8STMSGR</td>
<td>BIGINT</td>
<td>Number of messages returned</td>
</tr>
<tr>
<td>BLOCKS_SENT</td>
<td>Q8STBLKS</td>
<td>BIGINT</td>
<td>Number of blocks sent</td>
</tr>
<tr>
<td>BLOCKS_RETURNED</td>
<td>Q8STBLKR</td>
<td>BIGINT</td>
<td>Number of blocks returned</td>
</tr>
<tr>
<td>ROWS_SENT</td>
<td>Q8STROWS</td>
<td>BIGINT</td>
<td>Number of rows sent</td>
</tr>
<tr>
<td>ROWS_RETURNED</td>
<td>Q8STROWR</td>
<td>BIGINT</td>
<td>Number of rows returned</td>
</tr>
<tr>
<td>CPU_TIME</td>
<td>Q8STSCPU</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's CPU time</td>
</tr>
<tr>
<td>ELAPSED_TIME</td>
<td>Q8STSELA</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's elapsed time</td>
</tr>
<tr>
<td>TCPIP_CPU_TIME</td>
<td>Q8STTCPU</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's TCP/IP CPU time</td>
</tr>
<tr>
<td>TCPIP_ELAP_TIME</td>
<td>Q8STTELA</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's TCP/IP CPU elapsed time</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>ACCUM_CPU_TIME</td>
<td>Q8STACPU</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's accumulated CPU time</td>
</tr>
<tr>
<td>ACCUM_ELAP_TIME</td>
<td>Q8STAELA</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's accumulated elapsed time</td>
</tr>
<tr>
<td>ACCUM_WAIT_TIME</td>
<td>Q8STAWAT</td>
<td>Decimal (15,6)</td>
<td>Accumulated wait time</td>
</tr>
<tr>
<td>STATE</td>
<td>Q8STTATE</td>
<td>Char (1)</td>
<td>Accelerator state</td>
</tr>
<tr>
<td>CURR_ACT_REQS</td>
<td>Q8STACTV</td>
<td>Smallint</td>
<td>Accelerator current active requests</td>
</tr>
<tr>
<td>MAX_ACT_REQS</td>
<td>Q8STMAXA</td>
<td>Smallint</td>
<td>Accelerator maximum active requests</td>
</tr>
<tr>
<td>AVG_QRY_QUE_LEN</td>
<td>Q8STAVGQ</td>
<td>Smallint</td>
<td>Accelerator average query queue length</td>
</tr>
<tr>
<td>QRY_QUE_LEN_HWM</td>
<td>Q8STMAXQ</td>
<td>Smallint</td>
<td>Accelerator query queue length HWM</td>
</tr>
<tr>
<td>AVG_CPU_UTIL_CO</td>
<td>Q8STCCPU</td>
<td>Smallint</td>
<td>Average CPU utilization on Accelerator coordinator nodes</td>
</tr>
<tr>
<td>NBR_ACT_CO_NODES</td>
<td>Q8STCNOD</td>
<td>Smallint</td>
<td>Number of active coordinator nodes</td>
</tr>
<tr>
<td>DATA_SKEW</td>
<td>Q8STSKEW</td>
<td>Smallint</td>
<td>Accelerator data skew</td>
</tr>
<tr>
<td>AVG_CPU_UT_WK_NO</td>
<td>Q8STWCPU</td>
<td>Smallint</td>
<td>Accelerator average CPU utility on worker nodes</td>
</tr>
<tr>
<td>NBR_ACT_WK_NO</td>
<td>Q8STWNOD</td>
<td>Smallint</td>
<td>Accelerator active worker nodes</td>
</tr>
<tr>
<td>AVG_QUE_LEN_03_H</td>
<td>Q8STAVGQ03</td>
<td>Smallint</td>
<td>Average queue length last 3 hours</td>
</tr>
<tr>
<td>AVG_QUE_LEN_24_H</td>
<td>Q8STAVGQ24</td>
<td>Smallint</td>
<td>Average queue length last 24 hours</td>
</tr>
<tr>
<td>AVG_QUE_WT_ELAP</td>
<td>Q8STQUEW</td>
<td>Decimal (15,6)</td>
<td>Average queue wait elapsed time</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HWM of the average queue wait elapsed time</td>
</tr>
<tr>
<td>MAX_QUE_WT_ELAP</td>
<td>Q8STQUEM</td>
<td>Decimal (15,6)</td>
<td>Maximum queue wait elapsed time</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HWM maximum queue wait elapsed time</td>
</tr>
<tr>
<td>PROCESS_CAPACITY</td>
<td>Q8STMIPS</td>
<td>BIGINT</td>
<td>Accelerator processing capacity</td>
</tr>
<tr>
<td>TOT_PROCESSORS</td>
<td>Q8STCORS</td>
<td>BIGINT</td>
<td>Total processors with accelerator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HWM total processors with accelerator</td>
</tr>
<tr>
<td>SUCCESSFUL_QRYS</td>
<td>Q8STSREQ</td>
<td>BIGINT</td>
<td>Successful query requests</td>
</tr>
<tr>
<td>FAILED_QRYS</td>
<td>Q8STFREQ</td>
<td>BIGINT</td>
<td>Failed query requests</td>
</tr>
<tr>
<td>FAIL_QRYS_INV_ST</td>
<td>Q8STFINV</td>
<td>BIGINT</td>
<td>Failed query requests due to invalid state</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| DSK_STO_AVAIL                  | Q8STDSDKA     | BIGINT     | ■ DMRSXDTL—Disk storage available (MB)  
■ DMRSXSUM—HWM disk storage available (MB) |
| DSK_STO_INUSE                  | Q8STDSDKU     | BIGINT     | Disk storage in use (MB) |
| DSK_STO_INUSE_DB               | Q8STDSDKB     | Smallint   | Disk storage in use for DB (MB) |
| AVG_MEM_USE_CNOD               | Q8STCPMU      | BIGINT     | ■ DMRSXDTL—Average memory use on coordinate node  
■ DMRSXSUM—HWM of average memory use on coordinate node |
| DATA_SLICES                    | Q8STNMDS      | BIGINT     | Version 2 number of data slices |
| AVG_MEM_USE_WNOD               | Q8STWPMU      | BIGINT     | ■ DMRSXDTL—Average memory use on work nodes (MB)  
■ DMRSXSUM—HWM of average memory use on work nodes (MB) |
| SHR_MEM_AVL_WNOD               | Q8STWSMA      | BIGINT     | ■ DMRSXDTL—Shared memory available on work nodes (MB)  
■ DMRSXSUM—HWM shared memory available on work nodes (MB) |
| SHR_MEM_USE_WNOD               | Q8STWSMU      | BIGINT     | ■ DMRSXDTL—Shared memory in use on work nodes (MB)  
■ DMRSXSUM—HWM shared memory in use on work nodes (MB) |
| MX_SR_MEM_US_WNO               | Q8STWSMM      | BIGINT     | ■ DMRSXDTL—Maximum SHR memory use on work nodes  
■ DMRSXSUM—HWM maximum SHR memory use on work nodes |
<p>| TOTSUCCQRYALLDB2               | Q8STNQSA      | BIGINT     | Total number of successful queries sent by all DB2s |
| TOTFAILQRYALLDB2               | Q8STNQFA      | BIGINT     | Total number of failed queries sent by all DB2s |
| TOTCURQRYTHISDB2               | Q8STNQCS      | BIGINT     | Total number of current queries sent by this DB2 |
| TOTCURQRYALLDB2                | Q8STACTV_64   | BIGINT     | Total number of current queries by all DB2s |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| MAXCURQRYTHISDB2                | Q8STMNQ5       | BIGINT     | DMRSXDTL—Maximum number of current queries this DB2  
|                                 |                |            | DMRSXSUM—HWM maximum number of current queries this DB2 |
| MAXCURQRYALLDB2S                | Q8STMAXA_64    | BIGINT     | DMRSXDTL—Maximum number of current queries by all DB2s  
|                                 |                |            | DMRSXSUM—HWM maximum number of current queries by all DB2s |
| TOTCPUCSTTHISDB2                | Q8STTCQS       | BIGINT     | DMRSXDTL—Maximum number of current queries this DB2  
|                                 |                |            | DMRSXSUM—HWM maximum number of current queries this DB2 |
| MNTCOSTTHISDB2                  | Q8STTCMS       | BIGINT     | DMRSXDTL—Maximum number of current queries this DB2  
|                                 |                |            | DMRSXSUM—HWM maximum number of current queries this DB2 |
| MNTCOSTALLDB2S                  | Q8STTCMA       | BIGINT     | DMRSXDTL—Maximum number of current queries all DB2s  
|                                 |                |            | DMRSXSUM—HWM maximum number of current queries all DB2s |
| DISKSPACEALLDB2S                | Q8STDSDA       | BIGINT     | DMRSXDTL—Disk space (MB) for all DB2s  
|                                 |                |            | DMRSXSUM—HWM disk space (MB) for all DB2s |
| MAXQUEUELENGTH                  | Q8STMAXQ_64    | BIGINT     | DMRSXDTL—Maximum queue length  
|                                 |                |            | DMRSXSUM—HWM maximum queue length |
| NBRACTWRKNODES                  | Q8STWNOD_64    | BIGINT     | Number of active worker nodes |
| CURQUELENGTH                    | Q8STCQL        | BIGINT     | The current queue length |
| CURCPUUTILCORDNOD               | Q8STCCPU_64    | BIGINT     | Current CPU utility on coordination node |
| CURCPUUTILWRKNOD                | Q8STWCPU_64    | BIGINT     | Current CPU utility on worker nodes |
| CPUCSTRPATHTHISDB2              | Q8STTCCS       | BIGINT     | DMRSXDTL—Maximum queue length  
|                                 |                |            | DMRSXSUM—HWM maximum queue length |
| CPUCSTRPAALLDB2S                | Q8STTCCA       | BIGINT     | DMRSXDTL—Maximum queue length  
|                                 |                |            | DMRSXSUM—HWM maximum queue length |
| LGRECREADTHISDB2                | Q8STNLRS       | BIGINT     | Total log records for this DB2 |
| LGRECREDAALLDB2S                | Q8STNLRA       | BIGINT     | Total log records for all DB2s |
| LGRECPROCTHISDB2                | Q8STNLTS       | BIGINT     | Total log records processed for this DB2 |
| LGRECPROCALLDB2S                | Q8STNLTA       | BIGINT     | Total log records processed for all DB2s |
| BYTESPROCTHISDB2                | Q8STNBS        | BIGINT     | Number of bytes processed for this DB2 |
| BYTESPROCALLDB2S                | Q8STNBA        | BIGINT     | Number of bytes processed for all DB2s |
| INSRTROWSTHISDB2                | Q8STNIS        | BIGINT     | Number of inserted rows for this DB2 |
### Performance Report Column

<table>
<thead>
<tr>
<th>Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSRTROWSALLDB2</td>
<td>Q8STNIA</td>
<td>BIGINT</td>
<td>Number of inserted rows for all DB2s</td>
</tr>
<tr>
<td>UPDTROWSTHISDB2</td>
<td>Q8STNUS</td>
<td>BIGINT</td>
<td>Number of updated rows for this DB2</td>
</tr>
<tr>
<td>UPDTROWSALLDB2A</td>
<td>Q8STNUA</td>
<td>BIGINT</td>
<td>Number of updated rows for all DB2s</td>
</tr>
<tr>
<td>DELROWSTHISDB2</td>
<td>Q8STNDS</td>
<td>BIGINT</td>
<td>Number of deleted rows for this DB2</td>
</tr>
<tr>
<td>DELROWSALLDB2S</td>
<td>Q8STNDA</td>
<td>BIGINT</td>
<td>Number of deleted rows for all DB2s</td>
</tr>
<tr>
<td>CURREPLATTHISDB2</td>
<td>Q8STCRL</td>
<td>BIGINT</td>
<td>Current replication latency for this DB2</td>
</tr>
<tr>
<td>CURREPSTATHISDB2</td>
<td>Q8STCSS</td>
<td>Char (1)</td>
<td>Current replication state for this DB2</td>
</tr>
<tr>
<td>TIMELASTSTART</td>
<td>Q8STSTART</td>
<td>Char (10)</td>
<td>Timestamp when Accelerator last started</td>
</tr>
<tr>
<td>TIMELASTSTATCHG</td>
<td>Q8STTATC</td>
<td>Char (10)</td>
<td>Timestamp of last status change</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWSLOCN</td>
<td>Varchar (128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>NAME_L</td>
<td>Q8STNAME</td>
<td>Varchar (128)</td>
<td>Accelerator server name</td>
</tr>
</tbody>
</table>

### DB2 accounting tables

This section provides detailed information about each of the records in the Performance Reporter performance data tables you can use to produce accounting reports.

The detail accounting records are stored in the DMRACDTL table. The summary accounting records are stored in the DMRACSUM table. They are organized as described in “Accounting detail and summary tables (DMRACxxx)” on page 391. The detail and summary buffer pool accounting records are stored in the DMRABDTL and DMRABSUM tables. They are organized as described in “Accounting buffer detail and summary tables (DMRABxxx)” on page 412. Refer to “DDF accounting detail and summary tables (DMRADxxx)” on page 417 for DDF accounting records.

The package detail accounting records are stored in the DMRAPDTL table. The package summary accounting records are stored in the DMRAPSUM table. They are organized as described in “Package accounting detail and summary tables (DMRAPxxx)” on page 424.

### Accounting detail and summary tables (DMRACxxx)

One accounting record is created from each SMF 101 record that is received.
Each row in the DMRACDTL table represents one transaction or thread within DB2, or the number of DDF/RRSAF threads represented by one rollup accounting record. Table 150 on page 386 describes the DMRACxxx table.

Each row in a DMRACSUM or DMRACSM2 table represents the aggregate number of the threads summarized according to the defined summary keys for the defined summary interval. For the DMRACSUM or DMRACSM2 tables, nonsummary key IDs are set to the last value processed, counts are totals, and any snapshot values are set to maximums.

The number of threads in either type of table is in the column TRANSCNT. The interval for a summary table is in column INTERVAL.

**Note**
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 151: DMRACDTL/DMRACSUM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM101SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM101SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>CLASS2CNT</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Count of transactions with DB2 SMF CLASS2 traces active</td>
</tr>
<tr>
<td>CLASS3CNT</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Count of transactions with DB2 SMF CLASS3 traces active</td>
</tr>
<tr>
<td>QWHC - Correlation Header</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLANNNAME</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPIID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Original primary authorization ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>YES</td>
<td>Char(8)</td>
<td>One of the following connection types, based on the value in QWHCATYP:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ DRDA (QWHCRUW)—DRDA protocol</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ CICS (QWHCCICS)—CICS attach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ DB2 CALL(QWHCD82C)—DB2 call attach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ DB2 UTIL (QWHCUTIL)—DB2 utilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ DLIBATCH (QWHCDLIB)—DL/I batch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ IMS-BMP (QWHCIMSB)—IMS attach BMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ IMS-CTL (QWHCICCTL)—IMS control region</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ IMS-MPP (QWHCIMSM)—IMS attach MPP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ RRSAF AT (QWHCTRDRS)—RRSAF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ TM-BATCH (QWHCTBMP)—IMS transaction BMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ TSO (QWHCTSO)—TSO foreground and background</td>
</tr>
<tr>
<td>ALLIEDCNT</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Integer</td>
<td>1 if not DBAT; includes ALLIEDDISTCNT</td>
</tr>
<tr>
<td>ALLIEDDISTCNT</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Integer</td>
<td>1 if not DBAT but QLAC data present</td>
</tr>
<tr>
<td>DBATCNT</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Integer</td>
<td>1 if DBAT and single QLAC; includes DBATDISTCNT</td>
</tr>
<tr>
<td>DBATDISTCNT</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Integer</td>
<td>1 if DBAT and &gt; 1 QLAC</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| ACCTTOKN                      | QWHCTOKN       | YES           | Char(22)   | Accounting token for CICS
This field applies to the CICS Attachment Facility, RRSAF, and database access threads. For database access threads, this is the value that is received from the requester system. If the connection to the requester system is through DB2 private protocols, this accounting value is identical to the accounting value used at the requester system. If the connection to the requester system is through DRDA protocols, this accounting value is determined from the first 22 bytes of the correlation token (CRRRTKN) value of the access relational database (ACCRDB) command received from the requester system during connect processing. |
| ENDUSERID                     | QWHCEUID       | NO            | Char(16)   | Optional work station end user ID
This ID can be different from the authorization ID used to connect to DB2. This field contains blanks if the client did not supply this information. |
| ENDUSERTX                     | QWHCEUTX       | NO            | Char(32)   | Optional end user's transaction or application name that identifies the application that is currently running, not the product that is used to run the application
This field contains blanks if the client did not supply this information. |
| ENDUSERWN                     | QWHCEUWN       | NO            | Char(18)   | Optional end user's workstation name
This field contains blanks if the client did not supply this information. |
| TRACEMASK                     | QWHSMTN        | NO            | Integer    | Active trace mask |
| PSTNUMBER                     | QWHCCV         | YES           | Char(4)    | PST number - IMS only |
| PSBNAME                       | QWHCCV         | YES           | Char(8)    | PSB name - IMS only |
| CICSTRAN                      | QWHCCV         | YES           | Char(4)    | Transaction code - CICS only |
| CORRNAME                      | QWHCCV         | YES           | Char(8)    | User ID, Jobname, CICS TRNID, or IMS PSBNAME |
| CONTEXTNAME                   | QWHCTCTX       | NO            | Varchar(128) | Trusted context name |
| ROLENAME                      | QWHCROLE       | NO            | Varchar(128) | Role name associated with authid |
| ORIGAPPLAUTH                  | QWHCOAUD       | NO            | Varchar(128) | Original application user ID |

QWHS - Standard Header
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2VERSION</td>
<td>QWHSSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record. For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>YES</td>
<td>Char(8)</td>
<td>LUWID - Network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>YES</td>
<td>Char(8)</td>
<td>LUWID - Logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>YES</td>
<td>Char(6)</td>
<td>LUWID - Instance ID</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>YES</td>
<td>Real</td>
<td>LUWID - Commit count</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year record was created</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
</tbody>
</table>

**QWAC - Accounting Record Instrumentation**

<p>| DATETIME                       | QWACESC        | YES            | Time stamp | Date and time record was created |
| DATE                           | QWACESC        | YES            | Date       | Date record was created |
| MONTH                          | QWACESC        | YES            | Char(2)    | Month record was created |
| DAY                            | QWACESC        | YES            | Char(2)    | Day record was created |
| TIME                           | QWACESC        | YES            | Time       | Time record was created |
| HOUR                           | QWACESC        | YES            | Char(2)    | Hour record was created |
| DAYOFWEEK#                     | QWACESC        | NO             | Smallint   | Relative day of week, 1 to 7, where Monday=1 and Sunday=7 |
| DAYOFWEEK                      | QWACESC        | NO             | Char(3)    | MON, TUE, WED, THU, FRI, SAT, SUN |
| WEEK#                          | QWACESC        | NO             | Integer    | Week number relative to the 1 January 1900 epoch |
| ROLLUPTERMCNT                  | QWACPCNT       | NO             | Integer    | Number of parallel tasks or utility subtasks created for the originating task or main utility task (for DDF/RRSAF rollup transactions). For parallel tasks or utility subtasks, this value is zero. |
| NETWORKID                      | QWACNID        | YES            | Char(16)   | Network ID |
| LATCHCNTWTP                    | QWACAWTP       | YES            | Decimal(15,6) | Accumulated wait time because of page latch contention (accounting or monitor class 3) |
| LATCHCNTRNH                    | QWACARNH       | YES            | Real       | Number of wait trace events processed for page latch contention (accounting or monitor class 3) |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBLMSGELAP</td>
<td>QWACAWTG</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Data sharing elapsed wait time sending messages</td>
</tr>
<tr>
<td>GBLMSGEVNT</td>
<td>QWACARNG</td>
<td>YES</td>
<td>Real</td>
<td>Data sharing waits sending messages</td>
</tr>
<tr>
<td>GBLLOKEKELAP</td>
<td>QWACAWTJ</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Data sharing elapsed wait time global lock contention</td>
</tr>
<tr>
<td>GBLLOKEVNT</td>
<td>QWACARNJ</td>
<td>YES</td>
<td>Real</td>
<td>Data sharing waits for global lock contention</td>
</tr>
<tr>
<td>SPTCB</td>
<td>QWACSPCP</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>TCB time processing SQL calls in a WLM address space</td>
</tr>
<tr>
<td>SPTCBBINDB2</td>
<td>QWACSPFT</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Stored procedure TCB time in DB2 (accounting class 2)</td>
</tr>
<tr>
<td>SPEVNT</td>
<td>QWACSPNE</td>
<td>YES</td>
<td>Real</td>
<td>Stored procedure SQL entry or exit events</td>
</tr>
<tr>
<td>SPWAITELAP</td>
<td>QWACCAST</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Stored procedure elapsed time waiting for TCB</td>
</tr>
<tr>
<td>SPWAITCNT</td>
<td>QWACCCANM</td>
<td>YES</td>
<td>Real</td>
<td>Stored procedure waits for a TCB</td>
</tr>
<tr>
<td>PARATASKS</td>
<td>QWACPSCNT</td>
<td>YES</td>
<td>Real</td>
<td>Parallel tasks or utility subtasks created for an originating parallel task or utility main task</td>
</tr>
<tr>
<td>PARALLTASKS</td>
<td>QWACPSCNT</td>
<td>NO</td>
<td>Integer</td>
<td>1 if CPU or I/O parallelism used; otherwise 0</td>
</tr>
<tr>
<td>CPUSUCONV</td>
<td>QWACSUCV</td>
<td>NO</td>
<td>Integer</td>
<td>CPU service unit conversion factor</td>
</tr>
<tr>
<td>LOGWRTEVNT</td>
<td>QWACARLG</td>
<td>NO</td>
<td>Real</td>
<td>Number of wait trace events processed for waits for log write I/O</td>
</tr>
<tr>
<td>LOGWRTELAP</td>
<td>QWACAWLG</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated wait time for log write I/O</td>
</tr>
<tr>
<td>WLMSVCCLASS</td>
<td>QWACWLME</td>
<td>NO</td>
<td>Char(8)</td>
<td>MVS workload manager service class name</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>This field is used only for database access threads on MVS 5.2 or later. In all other cases, this field contains binary zeroes. The WLM service class determines the MVS WLM priority of the work performed by the database access thread.</td>
</tr>
<tr>
<td>LOGRECORDS</td>
<td>QWACLRSN</td>
<td>NO</td>
<td>Real</td>
<td>Number of log records written</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The amount of logging for a thread can exceed the amount of logging for units of recovery because the logging for a thread includes logging of actions performed by DB2 on behalf of the thread.</td>
</tr>
<tr>
<td>LOGBYTES</td>
<td>QWACRAB</td>
<td>NO</td>
<td>Real</td>
<td>Total number of bytes of log records written</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
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<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>FUNCTCB</td>
<td>QWACUDCP</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated TCB time used to satisfy user-defined function requests processed in a DB2 stored procedures address space or WLM established address space</td>
</tr>
<tr>
<td>FUNCSQLTCB</td>
<td>QWACUDTT</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated TCB time in DB2 for processing SQL statements issued by user-defined functions. This time is not included in QWACUDCP.</td>
</tr>
<tr>
<td>FUNCSQLEVNT</td>
<td>QWACUDNE</td>
<td>NO</td>
<td>Real</td>
<td>Number of SQL entry/exit events performed by user-defined functions</td>
</tr>
<tr>
<td>FUNCWAIT</td>
<td>QWACUDST</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Total elapsed time spent waiting for an available TCB before the user-defined function could be scheduled</td>
</tr>
<tr>
<td>FUNCELAP</td>
<td>QWACUDEA</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Total elapsed time spent in user-defined functions, including time spent executing SQL</td>
</tr>
<tr>
<td>FUNCSQLELAP</td>
<td>QWACUDEB</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Total elapsed time spent for user-defined functions to execute SQL</td>
</tr>
<tr>
<td>TRIGGERTCB</td>
<td>QWACTRRT</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated TCB time used while executing under the control of triggers (does not include zIIP CPU time)</td>
</tr>
<tr>
<td>TRIGGERELAP</td>
<td>QWACTRET</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated elapsed time used while executing under the control of triggers</td>
</tr>
<tr>
<td>PREENCTCB</td>
<td>QWACPECT</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated TCB time used before the enclave is created</td>
</tr>
<tr>
<td>PREENCSQLTCB</td>
<td>QWACPECD</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated CPU time used for DB2 to process SQL statements before the enclave is created</td>
</tr>
<tr>
<td>SPROCELAP</td>
<td>QWACSPEA</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Total elapsed time spent in stored procedures, including time spent executing SQL</td>
</tr>
<tr>
<td>SPROCSQLELAP</td>
<td>QWACSPEB</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Total elapsed time spent executing SQL in stored procedures</td>
</tr>
<tr>
<td>ENCTRIGGERTCB</td>
<td>QWACTRTE</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Trigger under enclave TCB time</td>
</tr>
<tr>
<td>ENCTRIGGERELAP</td>
<td>QWACTREE</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Trigger under enclave elapsed time</td>
</tr>
<tr>
<td>NORMTERMCNT</td>
<td>QWACRINV</td>
<td>NO</td>
<td>Integer</td>
<td>Normal termination - 1 if QWACRINV = 4-16</td>
</tr>
<tr>
<td>ABNORMTERMCNT</td>
<td>QWACRINV</td>
<td>NO</td>
<td>Integer</td>
<td>Abnormal termination - 1 if QWACRINV &gt; 16</td>
</tr>
<tr>
<td>SVPOINTREQ</td>
<td>QWACSVPT</td>
<td>NO</td>
<td>Real</td>
<td>Savepoint requests</td>
</tr>
<tr>
<td>SVPOINTREL</td>
<td>QWACRLSV</td>
<td>NO</td>
<td>Real</td>
<td>Release savepoint requests</td>
</tr>
<tr>
<td><strong>Performance Report</strong></td>
<td><strong>Column Name</strong></td>
<td><strong>SMF Field Name</strong></td>
<td><strong>Used in Report</strong></td>
<td><strong>Field Type</strong></td>
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<tr>
<td><strong>Column Name</strong></td>
<td><strong>SMF Field Name</strong></td>
<td><strong>Used in Report</strong></td>
<td><strong>Field Type</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>SVPOROLLBK</td>
<td>QWACRBSV</td>
<td>NO</td>
<td>Real</td>
<td>Rollback savepoint requests</td>
</tr>
<tr>
<td>WTELAWTK</td>
<td>QWACAWTK</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for child L-locks</td>
</tr>
<tr>
<td>WTELAWTM</td>
<td>QWACAWTM</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for other L-locks</td>
</tr>
<tr>
<td>WTELAWTN</td>
<td>QWACAWTN</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for pageset/partition P-locks</td>
</tr>
<tr>
<td>WTELAWTO</td>
<td>QWACAWTO</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for page P-locks</td>
</tr>
<tr>
<td>WTELAWTQ</td>
<td>QWACAWTQ</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for other P-locks</td>
</tr>
<tr>
<td>WTEVARNK</td>
<td>QWACARNK</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for child L-locks</td>
</tr>
<tr>
<td>WTEVARNM</td>
<td>QWACARNM</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for other L-locks</td>
</tr>
<tr>
<td>WTEVARNN</td>
<td>QWACARNN</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for pageset/partition P-locks</td>
</tr>
<tr>
<td>WTEVARNO</td>
<td>QWACARNO</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for page P-locks</td>
</tr>
<tr>
<td>WTEVARNQ</td>
<td>QWACARNQ</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for other P-locks</td>
</tr>
<tr>
<td>THDSTART</td>
<td>QWACBSC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Beginning store-clock time</td>
</tr>
<tr>
<td>ELAPSETOD</td>
<td>QWACBSC QWACESC</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed time</td>
</tr>
<tr>
<td>ELAPSETCB</td>
<td>QWACBJST QWACEJST QWACSPCP QWACUDCP QWACTRIT QWACTRTE</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>TCB CPU time, including stored procedures, triggers, and user-defined functions (does not include zIIP CPU time)</td>
</tr>
<tr>
<td>ELAPSESRB</td>
<td>QWACBSRB QWACESRB</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SRB CPU time</td>
</tr>
<tr>
<td>REASON</td>
<td>QWACRINV</td>
<td>YES</td>
<td>Integer</td>
<td>Reason accounting invoked</td>
</tr>
<tr>
<td>P2COMMITS</td>
<td>QWACCOMM</td>
<td>YES</td>
<td>Real</td>
<td>Phase 2 or single-phase commits (sync)</td>
</tr>
<tr>
<td>ABORTS</td>
<td>QWACABRT</td>
<td>YES</td>
<td>Real</td>
<td>Aborts</td>
</tr>
</tbody>
</table>
## Performance Report

<table>
<thead>
<tr>
<th>Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDB2TOD</td>
<td>QWACASC, QWACSPEB, QWACUDEB, QWACTREE, QWACTRET</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed DB2 time, including stored procedures, triggers, and user-defined functions</td>
</tr>
<tr>
<td>EDB2TCB</td>
<td>QWACAJSTQW ACSPTT QWACUDTT QWACTRTT QWACTRTTE</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>TCB CPU in DB2, including stored procedures, triggers, and user-defined functions (does not include zIIP CPU time)</td>
</tr>
<tr>
<td>EDB2SRB</td>
<td>QWACASRB</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>SRB CPU in DB2 (not used in DB2 6.1 and later)</td>
</tr>
<tr>
<td>EWAITIO</td>
<td>QWACAWTI</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for synchronous I/O Log waits are not included in this field.</td>
</tr>
<tr>
<td>EWAITLAL</td>
<td>QWACAWTL</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for lock or latch</td>
</tr>
<tr>
<td>ENTEXEVNT</td>
<td>QWACARNA</td>
<td>YES</td>
<td>Real</td>
<td>Number of DB2 exit/entry events</td>
</tr>
<tr>
<td>WAITEVNT</td>
<td>QWACARNE</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for synchronous I/O Log waits are not included in this field.</td>
</tr>
<tr>
<td>WAITREADIO</td>
<td>QWACAWTR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for other read 1/O</td>
</tr>
<tr>
<td>WAITWRITEIO</td>
<td>QWACAWTW</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for other write 1/O</td>
</tr>
<tr>
<td>WAITSYNCEVENT</td>
<td>QWACAWTE</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for unit switch Data set waits are not included in this field.</td>
</tr>
<tr>
<td>WEVLOCK</td>
<td>QWACARNL</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for lock/latch</td>
</tr>
<tr>
<td>WEVREAD</td>
<td>QWACARNR</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for other read</td>
</tr>
<tr>
<td>WEVWRITE</td>
<td>QWACARNW</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for other write</td>
</tr>
<tr>
<td>WEVSYNCH</td>
<td>QWACARNS</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for unit switch Data set waits are not included in this field.</td>
</tr>
<tr>
<td>LOBWAITCNT</td>
<td>QWACALBC</td>
<td>NO</td>
<td>Real</td>
<td>Number of waits for LOB TCP/IP initialization events</td>
</tr>
<tr>
<td>LOBWAITLEAP</td>
<td>QWACALBW</td>
<td>NO</td>
<td>Decimal (15, 6)</td>
<td>Elapsed time waiting for LOB TCP/IP initialization</td>
</tr>
</tbody>
</table>

### QWHA - Data Sharing

<table>
<thead>
<tr>
<th>Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>QPAC - General Package Accounting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOPKGCNT</td>
<td>QPAC</td>
<td>NO</td>
<td>Integer</td>
<td>No packaging accounting - 1 if no QPACs</td>
</tr>
<tr>
<td>FIRSTPKG</td>
<td>QPACPCKID</td>
<td>YES</td>
<td>Char(18)</td>
<td>First package or DBRM executed (plannname if accounting class 7 not active)</td>
</tr>
<tr>
<td><strong>QWHD - Distributed Agent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Distributed transaction requestor location name</td>
</tr>
<tr>
<td>REQPROD</td>
<td>QWHDRPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Distributed transaction requestor product ID</td>
</tr>
<tr>
<td>REQPRODREL</td>
<td>QWHDRPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>VvvRrrMm - version, release, modification level of the requestor for a distributed transaction</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Interval for the summary accounting table</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>QWACPCNT for rollup records, otherwise, see description</td>
<td>YES</td>
<td>Integer</td>
<td>Transaction thread count For summary tables, this field contains the number of transactions that were used to calculate the column values. <strong>Note:</strong> This value is 1 for each detail accounting record, except in DDF/RRSAF detail records, where this value is the number of rollup records combined to create the record. This value is not the total number of individual accounting transactions represented in the record.</td>
</tr>
<tr>
<td><strong>QWAX - Accounting Class 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAITARCLLOG</td>
<td>QWAXALOG</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for archive log quiesce</td>
</tr>
<tr>
<td>ARCLOG</td>
<td>QWAXALCT</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for archive log quiesce</td>
</tr>
<tr>
<td>DRAINLKRND</td>
<td>QWAXARND</td>
<td>YES</td>
<td>Real</td>
<td>Wait events for drain locks (accounting or monitor class 3)</td>
</tr>
<tr>
<td>DRAINLKWDR</td>
<td>QWAXAWDR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait time for a drain lock (accounting or monitor class 3)</td>
</tr>
<tr>
<td>CLAIMRLWCL</td>
<td>QWAXAWCL</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait time for a drain when waiting for claims to be released (accounting or monitor class 3)</td>
</tr>
<tr>
<td>CLAIMRLRNC</td>
<td>QWAXARNC</td>
<td>YES</td>
<td>Real</td>
<td>Wait events processed for waits for claims to be released (accounting or monitor class 3)</td>
</tr>
<tr>
<td>ARCHREADWAR</td>
<td>QWAXAWAR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for an archive read from tape (accounting or monitor class 3)</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
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<td>-------------------------------</td>
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<td>-------------</td>
</tr>
<tr>
<td>ARCHREADNAR</td>
<td>QWAXANAR</td>
<td>YES</td>
<td>Real</td>
<td>Wait events processed for archive read (accounting or monitor class 3)</td>
</tr>
<tr>
<td>OPENCLSELAP</td>
<td>QWAXOCSE</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated wait time for a synchronous execution unit switch to the DB2 OPEN/CLOSE data set service or the HSM recall service</td>
</tr>
<tr>
<td>SYSLGRNGELAP</td>
<td>QWAXSLSE</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated wait time for a synchronous execution unit switch to the DB2 SYSLGRNG recording service This service is also sometimes used for level ID checking for down-level detection.</td>
</tr>
<tr>
<td>DATASETELAP</td>
<td>QWAXDSSE</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated wait time for a synchronous execution unit switch to the DB2 data space manager services, which include define data set, extend data set, delete data set, reset data set, and VSAM catalog access</td>
</tr>
<tr>
<td>OTHERSWELAP</td>
<td>QWAXOTSE</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Accumulated wait time for a synchronous execution unit switch to other DB2 service tasks</td>
</tr>
<tr>
<td>OPENCLSEVNT</td>
<td>QWAXOCNS</td>
<td>NO</td>
<td>Real</td>
<td>Number of wait trace events processed for waits for synchronous execution unit switching to the OPEN/CLOSE service</td>
</tr>
<tr>
<td>SYSLGRNGEVNT</td>
<td>QWAXSLNS</td>
<td>NO</td>
<td>Real</td>
<td>Number of wait trace events processed for waits for synchronous execution unit switching to the SYSLGRNG recording service</td>
</tr>
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<td>DATASETENVNT</td>
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<td>Wait time for asynchronous group buffer pool requests (IXLCACHE + IXLFCOMP)</td>
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QX - SQL Statement
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<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
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<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
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<td>Total number of parallel groups executed on a single DB2 due to one of the following reasons: When the plan or package was bound, the coordinator subsystem parameter was set to YES, but the parameter is set to NO when the program runs The plan or package was bound on a DB2 with the coordinator subsystem parameter set to YES, but the program is being run on a different DB2 that has the coordinator value set to NO</td>
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<td>Number of times DB2 satisfied a PREPARE request by making a copy of a statement in the prepared statement cache</td>
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<td>Number of times DB2 searched the prepared statement cache but could not find a suitable prepared statement</td>
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<td>Number of times DB2 did an implicit PREPARE for a statement bound with KEEPDYNAMIC(YES) because the prepared statement cache did not contain a valid copy of the prepared statement</td>
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<td>Number of times DB2 discarded a prepared statement from the prepared statement cache because the number of prepared statements in the cache exceeded the value of subsystem parameter MAXKEEPD</td>
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<td>Number of parallel groups for which DB2 reformulated the parallel portion of the access path because the SYSPLEX configuration at run time was different from the SYSPLEX configuration at bind time. This counter is incremented only by the parallelism coordinator at run time</td>
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<td>PARANOBP</td>
<td>QXREPOP2</td>
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<td>Number of parallel groups for which DB2 reformulated the parallel portion of the access path because there was not enough buffer pool resource. This counter is incremented only by the parallelism coordinator at run time</td>
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<td>Real</td>
<td>Number of times that DB2 attempted to use direct row access but reverted to using an index to locate a record</td>
</tr>
<tr>
<td>DIRECTROWTS</td>
<td>QXROITS</td>
<td>NO</td>
<td>Real</td>
<td>Number of times that DB2 attempted to use direct row access but reverted to using a table space scan to locate a record</td>
</tr>
<tr>
<td>STMTTRIGGER</td>
<td>QXSTTRG</td>
<td>NO</td>
<td>Real</td>
<td>Number of times a statement trigger is activated</td>
</tr>
<tr>
<td>ROWTRIGGER</td>
<td>QXROWTRG</td>
<td>NO</td>
<td>Real</td>
<td>Number of times a row trigger is activated</td>
</tr>
<tr>
<td>SQLERRTRIGGER</td>
<td>QXTRGERR</td>
<td>NO</td>
<td>Real</td>
<td>Number of times an SQL error occurred during the execution of a triggered action</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>MAXSQLCASCADE</td>
<td>QXCASCDP</td>
<td>NO</td>
<td>Real</td>
<td>Maximum level of nested SQL cascading due to triggers, user-defined functions, and stored procedures</td>
</tr>
<tr>
<td>FUNC</td>
<td>QXCAUD</td>
<td>NO</td>
<td>Real</td>
<td>Number of user-defined functions executed</td>
</tr>
<tr>
<td>FUNCAB</td>
<td>QXCAUDAB</td>
<td>NO</td>
<td>Real</td>
<td>Number of times a user-defined function abended</td>
</tr>
<tr>
<td>FUNCTO</td>
<td>QXCAUDTO</td>
<td>NO</td>
<td>Real</td>
<td>Number of times a user-defined function timed out waiting to be scheduled</td>
</tr>
<tr>
<td>FUNC1RJ</td>
<td>QXCAUDRJ</td>
<td>NO</td>
<td>Real</td>
<td>Number of times a user-defined function was rejected</td>
</tr>
<tr>
<td>CREATETEQ</td>
<td>QXCRESEQ</td>
<td>NO</td>
<td>Real</td>
<td>Number of CREATE SEQUENCE statements</td>
</tr>
<tr>
<td>ALTERSEQ</td>
<td>QXALTSEQ</td>
<td>NO</td>
<td>Real</td>
<td>Number of ALTER SEQUENCE statements</td>
</tr>
<tr>
<td>DROPSEQ</td>
<td>QXDROSEQ</td>
<td>NO</td>
<td>Real</td>
<td>Number of DROP SEQUENCE statements</td>
</tr>
<tr>
<td>PREPRESOSTRIX</td>
<td>QXPRESI</td>
<td>NO</td>
<td>Real</td>
<td>Number of PREPARE statements for which the use of indexes was restricted because the indexes were in a pending state</td>
</tr>
<tr>
<td>ALTERVIEW</td>
<td>QXALTVW</td>
<td>NO</td>
<td>Real</td>
<td>Number of ALTER VIEW statements</td>
</tr>
<tr>
<td>CLASS1CPU_ZIIP</td>
<td>QWACCLS1_ZII</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Class 1 CPU time executed on a zIIP</td>
</tr>
<tr>
<td>CLASS2CPU_ZIIP</td>
<td>QWACCLS2_ZII</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Class 2 CPU time executed on a zIIP</td>
</tr>
<tr>
<td>TRIGGERCPU_ZIIP</td>
<td>QWACTRTT_ZII</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Trigger CPU time executed on a zIIP</td>
</tr>
<tr>
<td>CPUZIIPELIGIBLE</td>
<td>QWACZIIP_ELI</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>CPU time that was eligible to execute on a zIIP</td>
</tr>
<tr>
<td>ALTERVIEW</td>
<td>QXALTVW</td>
<td>YES</td>
<td>Real</td>
<td>Number of ALTER VIEW</td>
</tr>
<tr>
<td>ALTERJAR</td>
<td>QXALTJAR</td>
<td>YES</td>
<td>Real</td>
<td>Number of ALTER JAR</td>
</tr>
<tr>
<td>MERGE</td>
<td>QXMERGE</td>
<td>YES</td>
<td>Real</td>
<td>Number of MERGE</td>
</tr>
<tr>
<td>TRUNCATETABLE</td>
<td>QXTRTBL</td>
<td>YES</td>
<td>Real</td>
<td>Number of TRUNCATE TABLE</td>
</tr>
<tr>
<td>CREATEROLE</td>
<td>QXCRRROL</td>
<td>YES</td>
<td>Real</td>
<td>Number of CREATE ROLE</td>
</tr>
<tr>
<td>DROPROLE</td>
<td>QXDRPROL</td>
<td>YES</td>
<td>Real</td>
<td>Number of DROP ROLE</td>
</tr>
<tr>
<td>CREATETRUST</td>
<td>QXCRCTX</td>
<td>YES</td>
<td>Real</td>
<td>Number of CREATE TRUSTED CONTEXT</td>
</tr>
<tr>
<td>ALTERTRUST</td>
<td>QXALTCTX</td>
<td>YES</td>
<td>Real</td>
<td>Number of ALTER TRUSTED CONTEXT</td>
</tr>
<tr>
<td>CREATETRUST</td>
<td>QXDRPCTX</td>
<td>YES</td>
<td>Real</td>
<td>Number of DROP TRUSTED CONTEXT</td>
</tr>
<tr>
<td>RENAMEINDEX</td>
<td>QXRNIX</td>
<td>YES</td>
<td>Real</td>
<td>Number of RENAME INDEX</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
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<tr>
<td>-------------------------------</td>
<td>----------------</td>
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<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>ROWSFETCHD</td>
<td>QXRWSFETCHD</td>
<td>NO</td>
<td>bigint</td>
<td>Number of rows fetched</td>
</tr>
<tr>
<td>ROWSINSRTD</td>
<td>QXRWSINSRTD</td>
<td>NO</td>
<td>bigint</td>
<td>Number of rows inserted</td>
</tr>
<tr>
<td>ROWSUPUPDTD</td>
<td>QXRWSUPUPDTD</td>
<td>NO</td>
<td>bigint</td>
<td>Number of rows updated</td>
</tr>
<tr>
<td>ROWSDELETD</td>
<td>QXRWSDELETD</td>
<td>NO</td>
<td>bigint</td>
<td>Number of rows deleted</td>
</tr>
</tbody>
</table>

**QBAC - Buffer Manager**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPGETPAGE</td>
<td>QBACGET</td>
<td>YES</td>
<td>Real</td>
<td>GETPAGEs</td>
</tr>
<tr>
<td>BPUPDAT</td>
<td>QBACSWS</td>
<td>YES</td>
<td>Real</td>
<td>Pages updated</td>
</tr>
<tr>
<td>BPSYNCRD</td>
<td>QBACRIO</td>
<td>YES</td>
<td>Real</td>
<td>Synchronous read I/O</td>
</tr>
<tr>
<td>BPPREFET</td>
<td>QBACSEQ</td>
<td>YES</td>
<td>Real</td>
<td>Sequential prefetch</td>
</tr>
<tr>
<td>BPSYNCRWR</td>
<td>QBACIMW</td>
<td>YES</td>
<td>Real</td>
<td>Synchronous write I/O</td>
</tr>
<tr>
<td>BPSTPREF</td>
<td>QBACLPF</td>
<td>YES</td>
<td>Real</td>
<td>Number of list prefetch requests</td>
</tr>
<tr>
<td>BPDPF</td>
<td>QBACDPF</td>
<td>YES</td>
<td>Real</td>
<td>Number of dynamic prefetch requests</td>
</tr>
<tr>
<td>BPNGT</td>
<td>QBACNGT</td>
<td>YES</td>
<td>Real</td>
<td>Number of unsuccessful GETPAGE operations</td>
</tr>
<tr>
<td>BPSIO</td>
<td>QBACSSO</td>
<td>YES</td>
<td>Real</td>
<td>Number of asynchronous pages read by prefetch under the control of the agent</td>
</tr>
</tbody>
</table>

**QT - Bind Data**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEADLOCKS</td>
<td>QTXADEA</td>
<td>YES</td>
<td>Real</td>
<td>Deadlocks</td>
</tr>
<tr>
<td>SUSPENDS</td>
<td>QTXASLOC</td>
<td>YES</td>
<td>Real</td>
<td>Suspends</td>
</tr>
<tr>
<td>TIMEOUTS</td>
<td>QTXATIM</td>
<td>YES</td>
<td>Real</td>
<td>Timeouts</td>
</tr>
<tr>
<td>LOCKESHR</td>
<td>QTXALEX</td>
<td>YES</td>
<td>Real</td>
<td>Lock escalations to shared</td>
</tr>
<tr>
<td>LOCKEXCL</td>
<td>QTXALEX</td>
<td>YES</td>
<td>Real</td>
<td>Lock escalations to exclusive</td>
</tr>
<tr>
<td>MAXPGLOCKS</td>
<td>QTXANPL</td>
<td>YES</td>
<td>Integer</td>
<td>Maximum page locks</td>
</tr>
<tr>
<td>SUSPLATCH</td>
<td>QTXASLAT</td>
<td>YES</td>
<td>Real</td>
<td>Latch suspends</td>
</tr>
<tr>
<td>SUSPOther</td>
<td>QTXASOTH</td>
<td>YES</td>
<td>Real</td>
<td>Other suspends</td>
</tr>
<tr>
<td>LOCKREQS</td>
<td>QTXALOCK</td>
<td>YES</td>
<td>Real</td>
<td>Lock requests</td>
</tr>
<tr>
<td>CLAIMREQ</td>
<td>QTXACLNO</td>
<td>YES</td>
<td>Real</td>
<td>Number of claim requests</td>
</tr>
<tr>
<td>CLAIMREQUN</td>
<td>QTXACLUN</td>
<td>YES</td>
<td>Real</td>
<td>Number of unsuccessful claim requests</td>
</tr>
<tr>
<td>DRAINREQ</td>
<td>QTXADRNQ</td>
<td>YES</td>
<td>Real</td>
<td>Number of drain requests</td>
</tr>
<tr>
<td>DRAINREQUN</td>
<td>QTXADRUN</td>
<td>YES</td>
<td>Real</td>
<td>Number of unsuccessful drain requests</td>
</tr>
<tr>
<td>RLFTABLEID</td>
<td>QTXARLID</td>
<td>NO</td>
<td>Char(2)</td>
<td>Resource limit table ID</td>
</tr>
<tr>
<td>RLFLIMDET</td>
<td>QTXAPREC</td>
<td>NO</td>
<td>Integer</td>
<td>Resource limit determination</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>RLFSULIMIT</td>
<td>QTXASLMT</td>
<td>NO</td>
<td>Integer</td>
<td>Limit in SUs</td>
</tr>
<tr>
<td>RLFCPULIMIT</td>
<td>QTXACLMT</td>
<td>NO</td>
<td>Integer</td>
<td>RLF limit in CPU milliseconds</td>
</tr>
<tr>
<td>RLFCPULIMITU</td>
<td>QTXACLMT</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>RLF limit in CPU seconds</td>
</tr>
<tr>
<td>RLFCPUUSED</td>
<td>QTXACHUS</td>
<td>NO</td>
<td>Integer</td>
<td>Highest CPU milliseconds used</td>
</tr>
<tr>
<td>RLFCPUUSEDU</td>
<td>QTXACHUS</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Highest CPU seconds used</td>
</tr>
<tr>
<td>UNLOCKREQS</td>
<td>QTXAUNLK</td>
<td>NO</td>
<td>Real</td>
<td>Unlock requests</td>
</tr>
<tr>
<td>QUERYREQS</td>
<td>QTXAQRY</td>
<td>NO</td>
<td>Real</td>
<td>Lock query requests</td>
</tr>
<tr>
<td>CHNGREQS</td>
<td>QTXACHG</td>
<td>NO</td>
<td>Real</td>
<td>Lock change requests</td>
</tr>
<tr>
<td>IRLMREQS</td>
<td>QTXAIRLM</td>
<td>NO</td>
<td>Real</td>
<td>Other IRLM requests</td>
</tr>
</tbody>
</table>

**QMDA - z/OS Account Code and DDF**

<table>
<thead>
<tr>
<th>Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIENTPLATFORM</td>
<td>QMDAPLAT</td>
<td>NO</td>
<td>Char(18)</td>
<td>Platform issuing request, if request is issued by UNIX, Linux, Microsoft Windows (Windows), or a JDBC driver</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Operating system issuing request, if request is issued by z/OS, z/VM, z/VSE, or iSeries</td>
</tr>
</tbody>
</table>

**QWDA - Data Sharing**

<table>
<thead>
<tr>
<th>Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2MBRMAX</td>
<td>QWDAXCLM</td>
<td>NO</td>
<td>Integer</td>
<td>Largest number of DB2 members that participated in processing a query</td>
</tr>
<tr>
<td>MBRCORR1-8</td>
<td>QWDAXCQO</td>
<td>NO</td>
<td>Char(8)</td>
<td>For a parallel task, this is a correlating value that indicates the member name of the parallelism coordinator</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
</tbody>
</table>

**QBGA - Buffer Manager**

<table>
<thead>
<tr>
<th>Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBPREADINVBD</td>
<td>QBGAXD</td>
<td>NO</td>
<td>Real</td>
<td>Synchronous coupling facility reads caused by invalid buffer and with data returned</td>
</tr>
<tr>
<td>GBPREADINVBR</td>
<td>QBGAXR</td>
<td>NO</td>
<td>Real</td>
<td>Synchronous coupling facility reads caused by invalid buffer with no data returned and a directory entry created</td>
</tr>
<tr>
<td>GBPREADNOPGD</td>
<td>QBGAMD</td>
<td>NO</td>
<td>Real</td>
<td>Synchronous coupling facility reads caused by page not in buffer pool and with data returned</td>
</tr>
<tr>
<td>GBPREADNOPGR</td>
<td>QBGAMR</td>
<td>NO</td>
<td>Real</td>
<td>Synchronous coupling facility reads caused by page not in buffer pool with no data returned and a directory entry created</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
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<td>-------------</td>
</tr>
<tr>
<td>GBPREADNOPGN</td>
<td>QBGAMN</td>
<td>NO</td>
<td>Real</td>
<td>Synchronous coupling facility reads caused by page not in buffer pool with no data returned and no directory entry created</td>
</tr>
<tr>
<td>GBPWRITCHG</td>
<td>QBGASW</td>
<td>NO</td>
<td>Real</td>
<td>Changed pages written synchronously to group buffer pool</td>
</tr>
<tr>
<td>GBPWRITCLEAN</td>
<td>QBGAWC</td>
<td>NO</td>
<td>Real</td>
<td>Clean pages written synchronously to group buffer pool</td>
</tr>
<tr>
<td>GBPUNREGPG</td>
<td>QBGADG</td>
<td>NO</td>
<td>Real</td>
<td>Number of coupling facility requests to unregister a page</td>
</tr>
<tr>
<td>GPEXPLICITXI</td>
<td>QBGAEX</td>
<td>YES</td>
<td>Real</td>
<td>Number of explicit cross-invalidations</td>
</tr>
<tr>
<td>GBPWRITCHK2</td>
<td>QBGA2S</td>
<td>NO</td>
<td>Real</td>
<td>Number of completion checks for writes to the secondary GBP that were suspended because the write had not yet completed processing</td>
</tr>
<tr>
<td>GBPASYNPRIM</td>
<td>QBGAHS</td>
<td>NO</td>
<td>Real</td>
<td>Asynchronous requests for primary GBP</td>
</tr>
<tr>
<td>GBPASYNSEC</td>
<td>QBGA2H</td>
<td>NO</td>
<td>Real</td>
<td>Asynchronous requests for secondary GBP</td>
</tr>
<tr>
<td>GBPDEPGETPG</td>
<td>QBGAGG</td>
<td>NO</td>
<td>Real</td>
<td>Getpages for GBP-dependent pages</td>
</tr>
<tr>
<td>GBPPLKSPMAP</td>
<td>QBGAP1</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock requests for space map pages</td>
</tr>
<tr>
<td>GBPPLKDATA</td>
<td>QBGAP2</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock requests for data pages</td>
</tr>
<tr>
<td>GBPPLKIDX</td>
<td>QBGAP3</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock requests for index leaf pages</td>
</tr>
<tr>
<td>GBPPLKUNLK</td>
<td>QBGAU1</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock unlock requests</td>
</tr>
<tr>
<td>GBPPSUSSPMAP</td>
<td>QBGAS1</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock suspensions for space map pages</td>
</tr>
<tr>
<td>GBPPSUSDATA</td>
<td>QBGAS2</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock suspensions for data pages</td>
</tr>
<tr>
<td>GBPPSUSIDX</td>
<td>QBGAS3</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock suspensions for index leaf pages</td>
</tr>
<tr>
<td>GBPWARMULTI</td>
<td>QBGAWM</td>
<td>NO</td>
<td>Real</td>
<td>Number of Write and Register Multiple (WARM) requests</td>
</tr>
<tr>
<td>GBPWAR</td>
<td>QBGAWS</td>
<td>NO</td>
<td>Real</td>
<td>Number of Write and Register (WAR) requests</td>
</tr>
<tr>
<td>QTGA - Global Locking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLPLOCKLK</td>
<td>QTGALPLK</td>
<td>NO</td>
<td>Real</td>
<td>Lock requests for P-locks</td>
</tr>
<tr>
<td>GLPLOCKCHG</td>
<td>QTGACPLK</td>
<td>NO</td>
<td>Real</td>
<td>Change requests for P-locks</td>
</tr>
<tr>
<td>GLPLOCKUNLK</td>
<td>QTGAUPLK</td>
<td>NO</td>
<td>Real</td>
<td>Unlock requests for P-locks</td>
</tr>
<tr>
<td>GLXESSYNCUNLK</td>
<td>QTGALSLM</td>
<td>NO</td>
<td>Real</td>
<td>Lock requests propagated to MVS XES synchronously</td>
</tr>
<tr>
<td>GLXESSYNCCHG</td>
<td>QTGACSLM</td>
<td>NO</td>
<td>Real</td>
<td>Change requests propagated to MVS XES synchronously</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
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<td>Field Type</td>
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<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>GLXESSYNCUNLK</td>
<td>QTGAUSLM</td>
<td>NO</td>
<td>Real</td>
<td>Unlock requests propagated to MVS XES synchronously</td>
</tr>
<tr>
<td>GLSUSPIRLM</td>
<td>QTGAIGLO</td>
<td>NO</td>
<td>Real</td>
<td>Suspends caused by IRLM global resource contention</td>
</tr>
<tr>
<td>GLSUSPXES</td>
<td>QTGASGLO</td>
<td>NO</td>
<td>Real</td>
<td>Suspends caused by MVS XES global resource contention</td>
</tr>
<tr>
<td>GLSUSPFALSE</td>
<td>QTGAFLSE</td>
<td>NO</td>
<td>Real</td>
<td>Suspends caused by false contentions</td>
</tr>
<tr>
<td>GLINCOMPAT</td>
<td>QTGADRTA</td>
<td>NO</td>
<td>Real</td>
<td>Global lock or change requests denied for incompatible retained lock</td>
</tr>
<tr>
<td>GLNOTFYSENT</td>
<td>QTGANTFY</td>
<td>NO</td>
<td>Real</td>
<td>Notify messages sent</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>GLFALSECONT</td>
<td>QTGAFCNT</td>
<td>NO</td>
<td>Integer</td>
<td>Number of false contention lock and unlock requests</td>
</tr>
</tbody>
</table>

**QIFA - IFI Accounting Information**

| IFIELAPSED                    | QIFAAIET       | NO             | Decimal(15,6) | Accumulated elapsed time spent processing IFI calls |
| IFITCBCPU                     | QIFAAITT       | NO             | Decimal(15,6) | Accumulated TCB CPU time spent processing IFI calls |
| IFIELAPDTC                   | QIFAAMBT       | NO             | Decimal(15,6) | Accumulated elapsed time spent processing data capture describes |
| IFIELAPEXT                   | QIFAAMLT       | NO             | Decimal(15,6) | Accumulated elapsed time spent extracting log records for tables defined with data capture changes |
| IFIENTRIES                   | QIFAAANIF      | NO             | Real         | Number of entries to and exits from IFI events |
| IFILOGREAD                   | QIFAAANLR      | NO             | Real         | Number of log reads performed for processing IFI read requests for IFCID 0185 |
| IFILOGREC                    | QIFAAANRC      | NO             | Real         | Number of log records written for tables defined with data capture changes |
| IFILOGRTN                    | QIFAAANRR      | NO             | Real         | Number of log records returned to caller of IFI reads call for IFCID 0185 |
| IFIDATEROW                   | QIFAAANDR      | NO             | Real         | Number of data rows returned in IFCID 0185 |
| IFIDATADSC                   | QIFAAANDD      | NO             | Real         | Number of data descriptions returned in IFCID 0185 |
### Performance Report Column Name

<table>
<thead>
<tr>
<th>Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFIDATACAP</td>
<td>QIFAANMB</td>
<td>NO</td>
<td>Real</td>
<td>Number of data capture describes for processing read requests for IFCID 0185 data</td>
</tr>
<tr>
<td>IFITABLRTN</td>
<td>QIFAANTB</td>
<td>NO</td>
<td>Real</td>
<td>Number of tables returned to caller of IFI reads call for IFCID 0185</td>
</tr>
<tr>
<td>DMRAUTOOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requester location</td>
</tr>
</tbody>
</table>

### Accounting buffer detail and summary tables (DMRABxxx)

Buffer accounting detail records are created from SMF 101 records that were created with accounting class 7/8 active.

One accounting record is created from each SMF 101 record received. Each row in the DMRABxxx table represents one transaction or thread within DB2. *Table 152 on page 413 describes the DMRABxxx tables.*

**Note**

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOUCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.
### Table 152: DMRABDTL/DMRABSUM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM101SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM101SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
</tbody>
</table>

#### QWHS - Standard Header

| DB2VERSION | QWHSRN | NO | Char(6) | Version of DB2 that created the record 0000 indicates a version prior to DB2 8.1, when QWHSSUBBV was not yet defined. |
| LUWIDNID    | QWHSNID | YES | Char(8) | LUWID - network ID |
| LUWIDLUNM   | QWHSLUNM | YES | Char(8) | LUWID - logical unit name |
| LUWIDINST   | QWHSXLUUV | YES | Char(6) | LUWID - instance ID |
| YEAR        | QWHSSTCK | YES | Char(4) | Year record was created |
| LOCATION    | QWHSLOCN | YES | Char(16) | Local location name (DB2 subsystem ID if not defined) |
| TRACEMASK   | QWHSMTN  | NO  | Integer | Active trace mask |
| IFCIDSEQ#   | QWHSESIEQ | NO  | Integer | IFCID sequence number |

#### QWAC - Accounting Record Instrumentation

<p>| DATETIME | QWACESC | YES | Time stamp | Date and time record was created |
| DATE      | QWACESC | YES | Date       | Date record was created |
| MONTH     | QWACESC | YES | Char(2)    | Month record was created |
| DAY       | QWACESC | YES | Char(2)    | Day record was created |
| TIME      | QWACESC | YES | Time       | Time record was created |
| HOUR      | QWACESC | YES | Char(2)    | Hour record was created |
| DAYOFWEEK#| QWACESC | NO  | Smallint   | Relative day of week, 1 to 7, where Monday=1 and Sunday=7 |
| DAYOFWEEK | QWACESC | NO  | Char(3)    | MON, TUE, WED, THU, FRI, SAT, SUN |
| WEEK#     | QWACESC | NO  | Integer    | Week number relative to the 1 January 1900 epoch |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPUSUCONV</td>
<td>QWACSUCV</td>
<td>NO</td>
<td>Integer</td>
<td>CPU service unit conversion factor</td>
</tr>
<tr>
<td>NETWORKID</td>
<td>QWACNID</td>
<td>YES</td>
<td>Char(16)</td>
<td>Network ID</td>
</tr>
</tbody>
</table>

**QWHA - Data Sharing**

<table>
<thead>
<tr>
<th>Group Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
</tbody>
</table>

**QPAC - General Package Accounting**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRSTPKG</td>
<td>QPACPKID</td>
<td>YES</td>
<td>Char(18)</td>
<td>First package or DBRM executed (planname if accounting class 7 not active)</td>
</tr>
</tbody>
</table>

**QWHC - Correlation Header**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP. For a list of connection types, see the description of CONTYPE in &quot;Accounting detail and summary tables (DMRACxxx)&quot; on page 391.</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Original primary authorization ID</td>
</tr>
<tr>
<td>ENDUSERID</td>
<td>QWHCEUID</td>
<td>NO</td>
<td>Char(16)</td>
<td>Optional work station end user ID. This ID can be different from the authorization ID used to connect to DB2. This field contains blanks if the client did not supply this information.</td>
</tr>
<tr>
<td>ENDUSERTX</td>
<td>QWHCEUTX</td>
<td>NO</td>
<td>Char(32)</td>
<td>Optional end user's transaction or application name that identifies the application that is currently running, not the product that is used to run the application. This field contains blanks if the client did not supply this information.</td>
</tr>
<tr>
<td>ENDUSERWN</td>
<td>QWHCEUWN</td>
<td>NO</td>
<td>Char(18)</td>
<td>Optional end user's workstation name. This field contains blanks if the client did not supply this information.</td>
</tr>
<tr>
<td>PSTNUMBER</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CORRNAME</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(8)</td>
<td>User ID, Jobname, CICS TRNID, or IMS PSBNAME</td>
</tr>
<tr>
<td>CONTEXTNAME</td>
<td>QWHCTCXT</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Trusted context name</td>
</tr>
<tr>
<td>ROLENAME</td>
<td>QWHCROLE</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Role name associated with auth ID</td>
</tr>
<tr>
<td>ORIGAPPLAUTH</td>
<td>QWHCOAUD</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Original application user ID</td>
</tr>
<tr>
<td><strong>QWHD - Distributed Agent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Distributed transaction requestor location name</td>
</tr>
<tr>
<td>REQPROD</td>
<td>QWHDPRID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Distributed transaction requestor product ID</td>
</tr>
<tr>
<td>REQPRODREL</td>
<td>QWHDPRID</td>
<td>NO</td>
<td>Char(8)</td>
<td>VvvRrrMm - version, release, modification level of the requestor for a distributed transaction</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Interval for the summary accounting table</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>QWACPCNT for rollup records, otherwise, see description</td>
<td>YES</td>
<td>Integer</td>
<td>Transaction thread count for the summary accounting table For summary tables, this field contains the number of transactions that were used to calculate the column values. <strong>Note:</strong> This value is 1 for each detail accounting record, except in DDF/RRSAF detail records, where this value is the number of rollup records combined to create the record. This value is not the total number of individual accounting transactions represented in the record.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QMDA - z/OS Account Code and DDF</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIENTPLATFORM</td>
<td>QMDAPLAT</td>
<td>NO</td>
<td>Char(18)</td>
<td>Platform issuing request, if request is issued by UNIX, Linux, Windows, or a JDBC driver Operating system issuing request, if request is issued by z/OS, z/VM, z/VSE, or iSeries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QBAC - Buffer Manager</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BPNAME</td>
<td>QBACPID</td>
<td>YES</td>
<td>Char(6)</td>
<td>BP0 through BP32K9 character format buffer pool ID</td>
</tr>
<tr>
<td>BPOOLID</td>
<td>QBACPID</td>
<td>YES</td>
<td>Integer</td>
<td>Buffer Pool ID</td>
</tr>
<tr>
<td>BPGETPAGE</td>
<td>QBACGET</td>
<td>YES</td>
<td>Real</td>
<td>GETPAGEs</td>
</tr>
<tr>
<td>BPPGUPDAT</td>
<td>QBACSWS</td>
<td>YES</td>
<td>Real</td>
<td>Pages updated</td>
</tr>
<tr>
<td>BPSYNCRD</td>
<td>QBACRIO</td>
<td>YES</td>
<td>Real</td>
<td>Synchronous read I/O</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>BPPREFET</td>
<td>QBACSEQ</td>
<td>YES</td>
<td>Real</td>
<td>Sequential prefetch</td>
</tr>
<tr>
<td>BPSYNCWR</td>
<td>QBACIMW</td>
<td>YES</td>
<td>Real</td>
<td>Synchronous write I/O</td>
</tr>
<tr>
<td>BPLISTPREF</td>
<td>QBACLPF</td>
<td>YES</td>
<td>Real</td>
<td>Number of list prefetch requests</td>
</tr>
<tr>
<td>BPDPF</td>
<td>QBACDPF</td>
<td>YES</td>
<td>Real</td>
<td>Number of dynamic prefetch requests</td>
</tr>
<tr>
<td>BPNGT</td>
<td>QBACNGT</td>
<td>YES</td>
<td>Real</td>
<td>Number of unsuccessful GETPAGE operations</td>
</tr>
<tr>
<td>BPSIO</td>
<td>QBACSIO</td>
<td>YES</td>
<td>Real</td>
<td>Number of asynchronous pages read by prefetch under the control of the agent</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
</tbody>
</table>

**QBGA - Buffer Manager**

<p>| GBPREADINVBD                    | QBGAXD         | NO             | Real       | Synchronous coupling facility reads caused by invalid buffer and with data returned |
| GBPREADINVBR                    | QBGAXR         | NO             | Real       | Synchronous coupling facility reads caused by invalid buffer with no data returned and a directory entry created |
| GBPREADNOPGD                    | QBGAMD         | NO             | Real       | Synchronous coupling facility reads caused by page not in buffer pool and with data returned |
| GBPREADNOPGR                    | QBGAMR         | NO             | Real       | Synchronous coupling facility reads caused by page not in buffer pool with no data returned and a directory entry created |
| GBPREADNOPGN                    | QBGAMN         | NO             | Real       | Synchronous coupling facility reads caused by page not in buffer pool with no data returned and no directory entry created |
| GBPWRITCHG                      | QBGASW         | NO             | Real       | Changed pages written synchronously to group buffer pool |
| GBPWRITCLEAN                    | QBGAWC         | NO             | Real       | Clean pages written synchronously to group buffer pool |
| GBPUNREGPG                      | QBGADG         | NO             | Real       | Number of coupling facility requests to unregister a page |
| GPEXPLICITXI                    | QBGAEX         | YES            | Real       | Number of explicit cross-invalidations |
| GBPWRITCHK2                     | QBGA2S         | NO             | Real       | Number of completion checks for writes to the secondary GBP that were suspended because the write had not yet completed processing |
| GPBASYNPRIM                     | QBGAHS         | NO             | Real       | Asynchronous requests for primary GBP |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBPASYNSEC</td>
<td>QBGA2H</td>
<td>NO</td>
<td>Real</td>
<td>Asynchronous requests for secondary GBP</td>
</tr>
<tr>
<td>GBPDEPGETPG</td>
<td>QBGAGG</td>
<td>NO</td>
<td>Real</td>
<td>Getpages for GBP-dependent pages</td>
</tr>
<tr>
<td>GBPPLKSPMAP</td>
<td>QBGAP1</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock requests for space map pages</td>
</tr>
<tr>
<td>GBPPLKDATA</td>
<td>QBGAP2</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock requests for data pages</td>
</tr>
<tr>
<td>GBPPLKIDX</td>
<td>QBGAP3</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock requests for index leaf pages</td>
</tr>
<tr>
<td>GBPPLKUNLK</td>
<td>QBGAU1</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock unlock requests</td>
</tr>
<tr>
<td>GBPPSUSSPMAP</td>
<td>QBGAS1</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock suspensions for space map pages</td>
</tr>
<tr>
<td>GBPPSUSDATA</td>
<td>QBGAS2</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock suspensions for data pages</td>
</tr>
<tr>
<td>GBPPSUSIDX</td>
<td>QBGAS3</td>
<td>NO</td>
<td>Real</td>
<td>Page P-lock suspensions for index leaf pages</td>
</tr>
<tr>
<td>GBPWARMULTI</td>
<td>QBGAWM</td>
<td>NO</td>
<td>Real</td>
<td>Number of Write and Register Multiple (WARM) requests</td>
</tr>
<tr>
<td>GBPWAR</td>
<td>QBGAWS</td>
<td>NO</td>
<td>Real</td>
<td>Number of Write and Register (WAR) requests</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
</tbody>
</table>

**DDF accounting detail and summary tables (DMRADxxx)**

DMRADxxx is an optional table for distributed processing accounting records.
Each row in the table represents information about one DDF location for one accounting record.

Table 153 on page 418 describes the DMRADxxx table.

**Table 153: DMRADDTL/DMRADSUM columns**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM101SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM101SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>FIRSTPKG</td>
<td>QPACPKID</td>
<td>YES</td>
<td>Char(18)</td>
<td>First package or DBRM executed (planname if accounting class 7 not active)</td>
</tr>
</tbody>
</table>

**QWAC - Accounting Record Instrumentation**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td></td>
<td>Time stamp</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td></td>
<td>Date record was created</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Month record was created</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Day record was created</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Time record was created</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Hour record was created</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>CPUUSUCONV</td>
<td>QWACSUCV</td>
<td>NO</td>
<td>Integer</td>
<td>CPU service unit conversion factor</td>
</tr>
</tbody>
</table>

**QWHA - Data Sharing**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
</tbody>
</table>

**QWHC - Correlation Header**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP. For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS. This field applies to the CICS Attachment Facility, RRSAF, and database access threads. For database access threads, this is the value that is received from the requester system. If the connection to the requester system is through DB2 private protocols, this accounting value is identical to the accounting value used at the requester system. If the connection to the requester system is through DRDA protocols, this accounting value is determined from the first 22 bytes of the correlation token (CRRTKN) value of the access relational database (ACCRDB) command received from the requester system during connect processing.</td>
</tr>
<tr>
<td>ENDUSERID</td>
<td>QWHCEUID</td>
<td>NO</td>
<td>Char(16)</td>
<td>Optional work station end user ID. This ID can be different from the authorization ID used to connect to DB2. This field contains blanks if the client did not supply this information.</td>
</tr>
<tr>
<td>ENDUSERTX</td>
<td>QWHCEUTX</td>
<td>NO</td>
<td>Char(32)</td>
<td>Optional end user's transaction or application name that identifies the application that is currently running, not the product that is used to run the application. This field contains blanks if the client did not supply this information.</td>
</tr>
<tr>
<td>ENDUSERWN</td>
<td>QWHCEUWN</td>
<td>NO</td>
<td>Char(18)</td>
<td>Optional end user's workstation name. This field contains blanks if the client did not supply this information.</td>
</tr>
<tr>
<td>PSTNUMBER</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRNAME</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(8)</td>
<td>User ID, Jobname, CICS TRNID, or IMS PSBNAME</td>
</tr>
<tr>
<td>CONTEXTNAME</td>
<td>QWHCTCXT</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Trusted context name</td>
</tr>
<tr>
<td>ROLENAME</td>
<td>QWHCROLE</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Role name associated with authid</td>
</tr>
<tr>
<td>ORIGAPPLAUTH</td>
<td>QWHCOAUD</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Original application user ID</td>
</tr>
</tbody>
</table>

**QWHS - Standard Header**

| DB2VERSION                     | QWHSSRN, QWHSSUBV | NO | Char(6) | Version of DB2 that created the record. For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined. |
| LOCATION                       | QWHSLOCN         | YES | Char(16) | Local location name (DB2 subsystem ID if not defined) |
| LUWIDCOMIT                     | QWHSLUCC         | YES | Real    | LUWID - Commit count |
| LUWIDLUNM                      | QWHSLUNM         | YES | Char(8) | LUWID - Logical unit name |
| LUWIDINST                      | QWHSLUUUV        | YES | Char(6) | LUWID - Instance ID |
| LUWIDNID                       | QWHSNID          | YES | Char(8) | LUWID - Network ID |
| TRACEMASK                      | QWHSMTN          | NO  | Integer | Active trace mask |
| YEAR                           | QWHSSTCK         | YES | Char(4) | Year record was created |

**QWHD - Distributed Agent**

| REQLOCATION                    | QWHDRQNM        | NO  | Char(8) | Requestor Location |
| REQPROD                        | QWHDPRID        | NO  | Char(8) | Distributed transaction requestor product ID |
| REQPRODREL                     | QWHDPRID        | NO  | Char(8) | VvvRrrMm - version, release, modification level of the requestor for a distributed transaction |

**QLAC - Distributed Data Facility**

<p>|REQSERV                         |QLACFLGS        |NO  |Char(9) |REQUESTOR or SERVER |
|METHOD                          |QLACFLGS, QWHCATYP |NO  |Char(4) |APPL or SYST or BOTH |
|NETWORKID                       |QWACNID         |YES |Char(16) |Network ID |
|INTERVAL                       |None            |YES |Integer |Interval for the summary accounting table |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSCNT</td>
<td>QWACPCNT for rollup records, otherwise, see description</td>
<td>YES</td>
<td>Integer</td>
<td>Transaction thread count for the summary accounting table. For summary tables, this field contains the number of transactions that were used to calculate the column values. <strong>Note:</strong> This value is 1 for each detail accounting record, except in DDF/RRSAF detail records, where this value is the number of rollup records combined to create the record. This value is not the total number of individual accounting transactions represented in the record.</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>DDFLOCATION</td>
<td>QLACLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Location name of the remote site</td>
</tr>
<tr>
<td>SQLSENT</td>
<td>QLACSQLS</td>
<td>YES</td>
<td>Real</td>
<td>SQL statements sent</td>
</tr>
<tr>
<td>SQLRECV</td>
<td>QLACSQLLR</td>
<td>YES</td>
<td>Real</td>
<td>SQL statements received</td>
</tr>
<tr>
<td>ROWSENT</td>
<td>QLACROWS</td>
<td>YES</td>
<td>Real</td>
<td>Rows sent</td>
</tr>
<tr>
<td>ROWRECV</td>
<td>QLACROWR</td>
<td>YES</td>
<td>Real</td>
<td>Rows received</td>
</tr>
<tr>
<td>BYTESENT</td>
<td>QLACBYTS</td>
<td>YES</td>
<td>Real</td>
<td>Bytes sent</td>
</tr>
<tr>
<td>BYTERECV</td>
<td>QLACBYTR</td>
<td>YES</td>
<td>Real</td>
<td>Bytes received</td>
</tr>
<tr>
<td>CONVSENT</td>
<td>QLACCNVS</td>
<td>YES</td>
<td>Real</td>
<td>Conversations initiated from this site</td>
</tr>
<tr>
<td>CONVRECV</td>
<td>QLACCNVR</td>
<td>YES</td>
<td>Real</td>
<td>Conversations initiated to this site</td>
</tr>
<tr>
<td>MSGSSENT</td>
<td>QLACMSGS</td>
<td>YES</td>
<td>Real</td>
<td>Messages sent</td>
</tr>
<tr>
<td>MSGSRECV</td>
<td>QLACMSGR</td>
<td>YES</td>
<td>Real</td>
<td>Messages received</td>
</tr>
<tr>
<td>TRANSENT</td>
<td>QLACTRNS</td>
<td>YES</td>
<td>Real</td>
<td>Transactions migrated to remote</td>
</tr>
<tr>
<td>TRANRECV</td>
<td>QLACTRNR</td>
<td>YES</td>
<td>Real</td>
<td>Transactions migrated from remote</td>
</tr>
<tr>
<td>COMMITSENT</td>
<td>QLACCOMS</td>
<td>YES</td>
<td>Real</td>
<td>Commits sent</td>
</tr>
<tr>
<td>COMMITRECV</td>
<td>QLACCOMR</td>
<td>YES</td>
<td>Real</td>
<td>Commits received</td>
</tr>
<tr>
<td>ABORTSENT</td>
<td>QLACABRS</td>
<td>YES</td>
<td>Real</td>
<td>Rollback requests sent</td>
</tr>
<tr>
<td>ABORTRECV</td>
<td>QLACABRR</td>
<td>YES</td>
<td>Real</td>
<td>Rollback requests received</td>
</tr>
<tr>
<td>CONVQUED</td>
<td>QLACCNVQ</td>
<td>YES</td>
<td>Real</td>
<td>Conversation requests queued</td>
</tr>
<tr>
<td>ELAPSWAIT</td>
<td>QLACCPUL</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed time remote wait</td>
</tr>
<tr>
<td>ELAPSDBAW</td>
<td>QLACCPUR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait for remote database</td>
</tr>
<tr>
<td>CPUDATAR</td>
<td>QLACDBAT</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>CPU time in remote database</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>SWLIMBLK</td>
<td>QLACCBLB</td>
<td>NO</td>
<td>Real</td>
<td>Switch to limited block protocol</td>
</tr>
<tr>
<td>SQLBOUND</td>
<td>QLACRBNBD</td>
<td>NO</td>
<td>Real</td>
<td>SQL bound for remote access</td>
</tr>
<tr>
<td>ROWSBUF</td>
<td>QLACBROW</td>
<td>NO</td>
<td>Real</td>
<td>Number of rows in buffer</td>
</tr>
<tr>
<td>BLKSENT</td>
<td>QLACBTBF</td>
<td>YES</td>
<td>Real</td>
<td>Blocks sent using block fetch</td>
</tr>
<tr>
<td>BLKRECV</td>
<td>QLACBRBF</td>
<td>YES</td>
<td>Real</td>
<td>Blocks received using block fetch</td>
</tr>
<tr>
<td>CONVALLOCS</td>
<td>QLACCNVA</td>
<td>NO</td>
<td>Real</td>
<td>Successful conversation allocations</td>
</tr>
<tr>
<td>CONVTERMS</td>
<td>QLACCNVT</td>
<td>NO</td>
<td>Real</td>
<td>Successful conversation terminations</td>
</tr>
<tr>
<td>MAXCONV</td>
<td>QLACCIEL</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum conversations open</td>
</tr>
<tr>
<td>REQUESTPRSE</td>
<td>QLACPRSE</td>
<td>YES</td>
<td>Real</td>
<td>Number of PREPARE requests sent to participant</td>
</tr>
<tr>
<td>REQUESTPRRC</td>
<td>QLACPRRC</td>
<td>YES</td>
<td>Real</td>
<td>Number of PREPARE requests received from coordinator</td>
</tr>
<tr>
<td>REQUESTLASE</td>
<td>QLACLASE</td>
<td>YES</td>
<td>Real</td>
<td>Number of LAST AGENT requests sent to coordinator</td>
</tr>
<tr>
<td>REQUESTLARC</td>
<td>QLACLARC</td>
<td>YES</td>
<td>Real</td>
<td>Number of LAST AGENT requests received from initiator</td>
</tr>
<tr>
<td>REQUESTCRSE</td>
<td>QLACCRSE</td>
<td>YES</td>
<td>Real</td>
<td>Number of COMMIT requests sent to participant</td>
</tr>
<tr>
<td>REQUESTCRRC</td>
<td>QLACCRRC</td>
<td>YES</td>
<td>Real</td>
<td>Number of COMMIT requests received from coordinator</td>
</tr>
<tr>
<td>REQUESTBKSE</td>
<td>QLACBKSE</td>
<td>YES</td>
<td>Real</td>
<td>Number of BACKOUT requests sent to participant</td>
</tr>
<tr>
<td>REQUESTBKRC</td>
<td>QLACBKRC</td>
<td>YES</td>
<td>Real</td>
<td>Number of BACKOUT requests received from coordinator</td>
</tr>
<tr>
<td>RESPONRRSE</td>
<td>QLACRRSE</td>
<td>YES</td>
<td>Real</td>
<td>Number of FORGET responses sent to coordinator</td>
</tr>
<tr>
<td>RESPONRRRC</td>
<td>QLACRRRC</td>
<td>YES</td>
<td>Real</td>
<td>Number of FORGET responses received from participant</td>
</tr>
<tr>
<td>RESPONVYSE</td>
<td>QLACVYSE</td>
<td>YES</td>
<td>Real</td>
<td>Number of request COMMIT responses sent to coordinator</td>
</tr>
<tr>
<td>RESPONVYRC</td>
<td>QLACVYRC</td>
<td>YES</td>
<td>Real</td>
<td>Number of request COMMIT responses received from participant</td>
</tr>
<tr>
<td>RESPONVNSE</td>
<td>QLACVNSE</td>
<td>YES</td>
<td>Real</td>
<td>Number of BACKOUT responses sent to coordinator</td>
</tr>
<tr>
<td>RESPONVNRC</td>
<td>QLACVNRC</td>
<td>YES</td>
<td>Real</td>
<td>Number of BACKOUT responses received from participant</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>THDRMTINDT</td>
<td>QLACINDT</td>
<td>YES</td>
<td>Real</td>
<td>Number of threads indoubt with remote location as coordinator</td>
</tr>
<tr>
<td>THDRMTCPTR</td>
<td>QLACCPRTR</td>
<td>YES</td>
<td>Real</td>
<td>Number of COMMIT operations performed with remote location as coordinator</td>
</tr>
<tr>
<td>THDRMTRBTR</td>
<td>QLACRBTR</td>
<td>YES</td>
<td>Real</td>
<td>Number of ROLLBACK operations performed with remote location as coordinator</td>
</tr>
<tr>
<td>THDRMTPRID</td>
<td>QLACPRID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Product ID of remote location</td>
</tr>
<tr>
<td>ELAPSLOTWT</td>
<td>QLACMDWT</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Total elapsed time spent waiting for an available database access agent slot This wait occurs when DB2 reaches its maximum number of database access agents, and a DBAT must wait for another DBAT to relinquish its slot.</td>
</tr>
</tbody>
</table>

**QMDA - z/OS Account Code and DDF**

<table>
<thead>
<tr>
<th>CLIENTPLATFORM</th>
<th>QMDAPLAT</th>
<th>NO</th>
<th>Char(18)</th>
<th>Platform issuing request, if request is issued by UNIX, Linux, Windows, or a JDBC driver Operating system issuing request, if request is issued by z/OS, z/VM, z/VSE, or iSeries</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLCOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDQRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>DDFLOCATION_L</td>
<td>QLSTLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the remote location</td>
</tr>
</tbody>
</table>
Package accounting detail and summary tables (DMRAPPxxx)

Package accounting detail records are created from SMF 101 records that were created with accounting class 7/8 active.

**Note**
The columns in Table 154 on page 424 are shown here in the same sequence as the SMF record sections.

Table 154 on page 424 describes the DMRAPPxxx table.

### Table 154: DMRAPDTL/DMRAPSUM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM101SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>SMF system ID</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM101SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>DB2 subsystem ID</td>
</tr>
<tr>
<td>QWHS - Standard Header</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record</td>
</tr>
<tr>
<td></td>
<td>QWHSSUBV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>YES</td>
<td>Char(8)</td>
<td>LUWID - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>YES</td>
<td>Char(8)</td>
<td>LUWID - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>YES</td>
<td>Char(6)</td>
<td>LUWID - instance ID</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>YES</td>
<td>Real</td>
<td>LUWID - commit count</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWHSSTCK</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year record was created</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>QWAC - Accounting Record Instrumentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date record was created</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Month record was created</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Day record was created</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time record was created</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(2)</td>
<td>Hour record was created</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>CPUSUCONV</td>
<td>QWACSUCV</td>
<td>NO</td>
<td>Integer</td>
<td>CPU service unit conversion factor</td>
</tr>
<tr>
<td>QWHA - Data Sharing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>QMDA - z/OS Account Code and DDF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLIENTPLATFORM</td>
<td>QMDAPLAT</td>
<td>NO</td>
<td>Char(18)</td>
<td>Platform issuing request, if request is issued by UNIX, Linux, Windows, or a JDBC driver Operating system issuing request, if request is issued by z/OS, z/VM, z/VSE, or iSeries</td>
</tr>
<tr>
<td>QWHC - Correlation Header</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>YES</td>
<td>Char(12)</td>
<td>Correlation ID value</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Original primary authorization ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>YES</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| ACCTTOKN                      | QWHCTOKN      | NO             | Char(22)   | Accounting token for CICS  
This field applies to the CICS Attachment Facility, RRSAF, and database access threads. For database access threads, this is the value that is received from the requester system. If the connection to the requester system is through DB2 private protocols, this accounting value is identical to the accounting value used at the requester system. If the connection to the requester system is through DRDA protocols, this accounting value is determined from the first 22 bytes of the correlation token (CRRTKN) value of the access relational database (ACCRDB) command received from the requester system during connect processing. |
| ENDUSERID                     | QWHCEUID      | NO             | Char(16)   | Optional work station end user ID  
This ID can be different from the authorization ID used to connect to DB2. This field contains blanks if the client did not supply this information. |
| ENDUSERTX                     | QWHCEUTX      | NO             | Char(32)   | Optional end user's transaction or application name that identifies the application that is currently running, not the product that is used to run the application  
This field contains blanks if the client did not supply this information. |
| ENDUSERWN                     | QWHCEUWN      | NO             | Char(18)   | Optional end user's workstation name  
This field contains blanks if the client did not supply this information. |
| PSTNUMBER                     | QWHCCV        | YES            | Char(4)    | PST number - IMS only |
| PSBNAME                       | QWHCCV        | YES            | Char(8)    | PSB name - IMS only  
Transaction code - CICS only |
| CICSTRAN                      | QWHCCV        | YES            | Char(4)    | User ID, Jobname, CICS TRNID, or IMS PSBNAME  
Role name associated with authid |
| CORRNAME                      | QWHCCV        | YES            | Char(8)    | Original application user ID |
| CONTEXTNAME                   | QWHCTCXT      | NO             | Varchar(128) | Trusted context name |
| ROLENAME                      | QWHCROLE      | NO             | Varchar(128) | Role name associated with authid |
| ORIGAPPLAUTH                  | QWHCOAUD      | NO             | Varchar(128) | Original application user ID |

**QWHD - Distributed Agent**

<p>| REQLOCATION                   | QWHDRQNM      | NO             | Char(16)   | Requestor location name for a distributed transaction |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQPROD</td>
<td>QWHDPRID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Distributed transaction requestor product ID</td>
</tr>
<tr>
<td>REQPRODREL</td>
<td>QWHDPRID</td>
<td>NO</td>
<td>Char(8)</td>
<td>VvvRrrMm - version, release, modification level of the requestor for a distributed transaction</td>
</tr>
<tr>
<td>NETWORKID</td>
<td>QWACNID</td>
<td>YES</td>
<td>Char(16)</td>
<td>Network ID</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>None</td>
<td>YES</td>
<td>Integer</td>
<td>Interval used only for the summary accounting package tables</td>
</tr>
<tr>
<td>TRANSCNT</td>
<td>QWACPCNT for rollup records, otherwise, see description</td>
<td>YES</td>
<td>Integer</td>
<td>Transaction thread count for the summary accounting package tables</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For summary tables, this field contains the number of transactions that were used to calculate the column values.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Note:</strong> This value is 1 for each detail accounting record, except in DDF/RRSAF detail records, where this value is the number of rollup records combined to create the record. This value is not the total number of individual accounting transactions represented in the record.</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
</tbody>
</table>

**QPAC - General Package Accounting**

<table>
<thead>
<tr>
<th></th>
<th>QPACPKID</th>
<th>YES</th>
<th>Char(18)</th>
<th>First package or DBRM executed (planname if accounting class 7 not active)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCCURRENCEs</td>
<td>None</td>
<td>YES</td>
<td>Smallint</td>
<td>Number of occurrences (useful in summary only)</td>
</tr>
<tr>
<td>PKGFLAG</td>
<td>QPACFLGS</td>
<td>YES</td>
<td>Char(4)</td>
<td>PKG for a package DBRM for a DBRM PRUP for package data for a parallel rollup record</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>If none of these flag values is found, the value of PKGFLAG is the hexadecimal representation of QPACFLGS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Note:</strong> This column is functionally stabilized. Consider using the following columns instead when testing for a non-zero value: PKGTYPE, CLASS7CNT, CLASS8CNT, CURRENTFLAGCNT, INSTOREDPROCCNT and AUTHNODB2CHKCNT.</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| PKGTYPE                        | QPACFLGS      | NO             | Char(1)      | P for a package (QPACPACK)  
D for a DBRM (QPACDBRM)  
Blank if neither value was found |
<p>| CURRENTFLAGCNT                | QPACFLGS      | NO             | Integer      | Number of times that this package is the current or most recently executed package (QPACCRT) |
| INSTOREDPROCCNT               | QPACFLGS      | NO             | Integer      | Number of times that this package was executed as part of a stored procedure (QPACINSP) |
| AUTHNODB2CHKCNT               | QPACFLGS      | NO             | Integer      | Numbers of times that authorization was successful without having to check the DB2 catalog (QPACAPC) |
| EXECLOCATION                  | QPACLOCN      | YES            | Char(16)     | Remote location name where package was executed (blank if executed locally) |
| COLLECTIONID                  | QPACCOLN      | YES            | Char(18)     | Package collection ID |
| PROGRAMNAME                   | QPACPSSID     | YES            | Char(18)     | Program name (package ID or DBRM) |
| CONSISTOKEN                   | QPACCONT      | YES            | Char(16)     | Consistency token (hexadecimal) converted to readable characters |
| CONSISTOKENX                  | QPACCONT      | YES            | Char(8)      | Consistency token (hexadecimal) in raw binary form |
| SQLCOUNT                      | QPACSQLOC     | YES            | Real         | SQL requests count |
| ELAPSEPKG                     | QPACSCT       | YES            | Decimal(15,6) | Total elapsed execution time for this package/DBRM |
| CPUCTCBPKG                    | QPACTJST      | YES            | Decimal(15,6) | Total TCB CPU time for this package/DBRM (does not include zIIP CPU time) |
| ENTEXEVENT                    | QPACARNA      | YES            | Real         | Number of DB2 entry/exit events |
| EVTSYNCIO                     | QPACARNE      | YES            | Real         | Number of wait events for synchronous I/O |
| ELAPSYNCIO                    | QPACAWTI      | YES            | Decimal(15,6) | Elapsed wait time for synchronous I/O |
| ELAPLATCH                      | QPACAWLH      | YES            | Decimal(15,6) | Elapsed time for latch wait |
| ELPLOCK                       | QPACAWTL      | YES            | Decimal(15,6) | Elapsed wait time for lock or latch |
| ELPOTHTREAD                   | QPACAWTR      | YES            | Decimal(15,6) | Elapsed wait time for other read I/O |
| ELPOTHWRT                     | QPACAWTW      | YES            | Decimal(15,6) | Elapsed wait time for other write I/O |
| ELPUNITSW                     | QPACAWTE      | YES            | Decimal(15,6) | Elapsed wait time for unit switch |
| ELPARQCS                      | QPACALOG      | YES            | Decimal(15,6) | Elapsed wait time for archive log quiesce |
| EVTLCK                         | QPACARNL      | YES            | Real         | Number of wait events for lock or latch |
| EVTOTHREAD                    | QPACARNR      | YES            | Real         | Number of wait events for other read I/O |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVTOTHWAIT</td>
<td>QPACARNW</td>
<td>YES</td>
<td>Real</td>
<td>Number of wait events for other write I/O</td>
</tr>
<tr>
<td>EVTUNITSW</td>
<td>QPACARNS</td>
<td>YES</td>
<td>Real</td>
<td>Number of waits for unit switch</td>
</tr>
<tr>
<td>EVTARCSQS</td>
<td>QPACALCT</td>
<td>YES</td>
<td>Real</td>
<td>Number of waits for archive log quiesce</td>
</tr>
<tr>
<td>EVTDRN</td>
<td>QPACARND</td>
<td>YES</td>
<td>Real</td>
<td>Number of waits for drain locks</td>
</tr>
<tr>
<td>ELDPDRN</td>
<td>QPACAWDR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait time for a drain</td>
</tr>
<tr>
<td>ELPCCLAIM</td>
<td>QPACAWCL</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait time for claim release</td>
</tr>
<tr>
<td>EVTCLAIM</td>
<td>QPACARNC</td>
<td>YES</td>
<td>Real</td>
<td>Number of wait events for claim release</td>
</tr>
<tr>
<td>ELPARCREAD</td>
<td>QPACAWAR</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait time for an archive read from tape</td>
</tr>
<tr>
<td>EVTARCREAD</td>
<td>QPACANAR</td>
<td>YES</td>
<td>Real</td>
<td>Number of wait trace events processed for archive read</td>
</tr>
<tr>
<td>ELPPGLAT</td>
<td>QPACAWTP</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Elapsed wait time for page latch contention</td>
</tr>
<tr>
<td>EVTPGLAT</td>
<td>QPACARNH</td>
<td>YES</td>
<td>Real</td>
<td>Number of wait events for page latch contention</td>
</tr>
<tr>
<td>GBLMSGELAP</td>
<td>QPACAWTG</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Data sharing elapsed wait time sending messages</td>
</tr>
<tr>
<td>GBLMSGEVNT</td>
<td>QPACARNG</td>
<td>YES</td>
<td>Real</td>
<td>Data sharing waits sending messages</td>
</tr>
<tr>
<td>GBLLOKEVLAP</td>
<td>QPACAWTJ</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Data sharing elapsed wait time global lock contention</td>
</tr>
<tr>
<td>GBLLOKEVNT</td>
<td>QPACARNJ</td>
<td>YES</td>
<td>Real</td>
<td>Data sharing waits for global lock contention</td>
</tr>
<tr>
<td>SPROCCNT</td>
<td>QPACSPNS</td>
<td>NO</td>
<td>Real</td>
<td>Number of stored procedures executed This value is calculated only if accounting class 8 is active.</td>
</tr>
<tr>
<td>FUNCNT</td>
<td>QPACUDNU</td>
<td>NO</td>
<td>Real</td>
<td>Number of user-defined functions scheduled) This value is calculated only if accounting class 8 is active.</td>
</tr>
<tr>
<td>NESTSCHEMA</td>
<td>QPACASCH</td>
<td>NO</td>
<td>Char(8)</td>
<td>Schema name under which nested activity (nesting of stored procedures, user-defined functions, or triggers) occurs</td>
</tr>
<tr>
<td>NESTNAME</td>
<td>QPACAANM</td>
<td>NO</td>
<td>Char(18)</td>
<td>Name of nested activity</td>
</tr>
<tr>
<td>NESTTYPE</td>
<td>QPACAAFG</td>
<td>NO</td>
<td>Char(5)</td>
<td>Type of nested activity:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ SPROC—Stored procedure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ UDF—User-defined function</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ TRIG—Trigger execution</td>
</tr>
<tr>
<td>WTELAWTK</td>
<td>QPACAWTK</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for child L-locks</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>WTELAWTM</td>
<td>QPACAWTM</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for other L-locks</td>
</tr>
<tr>
<td>WTELAWTN</td>
<td>QPACAWTN</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for pageset/partition P-locks</td>
</tr>
<tr>
<td>WTELAWTO</td>
<td>QPACAWTQ</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for page P-locks</td>
</tr>
<tr>
<td>WTELAWTQ</td>
<td>QPACAWTQ</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Wait time for global contention for other P-locks</td>
</tr>
<tr>
<td>WTEVARNK</td>
<td>QPACARNK</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for child L-locks</td>
</tr>
<tr>
<td>WTEVARNM</td>
<td>QPACARNM</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for other L-locks</td>
</tr>
<tr>
<td>WTEVARNN</td>
<td>QPACARNN</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for pageset/partition P-locks</td>
</tr>
<tr>
<td>WTEVARNO</td>
<td>QPACARNO</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for page P-locks</td>
</tr>
<tr>
<td>WTEVARNQ</td>
<td>QPACARNQ</td>
<td>NO</td>
<td>Real</td>
<td>Number of events with global contention for other P-locks</td>
</tr>
<tr>
<td>PKGSWITCH</td>
<td>QPACSWITCH</td>
<td>NO</td>
<td>Real</td>
<td># of times this package was switched to; for the first package run by an application, the initial call counts as a package switch</td>
</tr>
<tr>
<td>CLASS7CPU_ZIIP</td>
<td>QPACCLS7_ZIIP</td>
<td>YES</td>
<td>Decimal(15,6)</td>
<td>Class 7 CPU time executed on a zIIP</td>
</tr>
<tr>
<td>CLASS7CNT</td>
<td>QPACFLGS</td>
<td>YES</td>
<td>Integer</td>
<td>Count of transactions with DB2 SMF class 7 traces active (QPACCLS7)</td>
</tr>
<tr>
<td>CLASS8CNT</td>
<td>QPACFLGS</td>
<td>YES</td>
<td>Integer</td>
<td>Count of transactions with DB2 SMF class 8 traces active (QPACCLS8)</td>
</tr>
</tbody>
</table>

**QBAC - Buffer Manager**

<table>
<thead>
<tr>
<th>QBAC - Buffer Manager</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPGETPAGE</td>
<td>Real</td>
<td>GETPAGEs</td>
</tr>
<tr>
<td>BPPGUPDAT</td>
<td>Real</td>
<td>Pages updated</td>
</tr>
<tr>
<td>BPSYNCRD</td>
<td>Real</td>
<td>Synchronous read I/O</td>
</tr>
<tr>
<td>BPPREFET</td>
<td>Real</td>
<td>Sequential prefetch</td>
</tr>
<tr>
<td>BPSYNCRWR</td>
<td>Real</td>
<td>Synchronous write I/O</td>
</tr>
<tr>
<td>BPLISTPREF</td>
<td>Real</td>
<td>Number of list prefetch requests</td>
</tr>
<tr>
<td>BPDPF</td>
<td>Real</td>
<td>Number of dynamic prefetch requests</td>
</tr>
<tr>
<td>BPNGT</td>
<td>Real</td>
<td>Number of unsuccessful GETPAGE operations</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>BPSIO</td>
<td>QBACSIO</td>
<td>NO</td>
</tr>
<tr>
<td>LOBWAITCINT</td>
<td>QPACALBC</td>
<td>NO</td>
</tr>
<tr>
<td>LOBWAITELAP</td>
<td>QPACALBW</td>
<td>NO</td>
</tr>
<tr>
<td>ROLLTHDS</td>
<td>QPACRLNU</td>
<td>NO</td>
</tr>
</tbody>
</table>

**QTXA - Lock Data**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEADLOCKS</td>
<td>QTXADEA</td>
<td>NO</td>
<td>Real</td>
<td>Deadlocks</td>
</tr>
<tr>
<td>SUSPENDS</td>
<td>QTXASLOC</td>
<td>NO</td>
<td>Real</td>
<td>Suspends</td>
</tr>
<tr>
<td>TIMEOUTS</td>
<td>QTXATIM</td>
<td>NO</td>
<td>Real</td>
<td>Timeouts</td>
</tr>
<tr>
<td>LOCKESHR</td>
<td>QTXALES</td>
<td>NO</td>
<td>Real</td>
<td>Lock escalations to shared</td>
</tr>
<tr>
<td>LOCKEXCL</td>
<td>QTXALEX</td>
<td>NO</td>
<td>Real</td>
<td>Lock escalations to exclusive</td>
</tr>
<tr>
<td>MAXPGLOCKS</td>
<td>QTXANPL</td>
<td>NO</td>
<td>Integer</td>
<td>Maximum page locks</td>
</tr>
<tr>
<td>RLFTABLEID</td>
<td>QTXARLID</td>
<td>NO</td>
<td>Char(2)</td>
<td>Resource limit table ID</td>
</tr>
<tr>
<td>RLFLIMDET</td>
<td>QTXAPREC</td>
<td>NO</td>
<td>Integer</td>
<td>Resource limit determination</td>
</tr>
<tr>
<td>RLFSULIMIT</td>
<td>QTXASLMET</td>
<td>NO</td>
<td>Integer</td>
<td>Limit in SUs</td>
</tr>
<tr>
<td>RLFCPULIMIT</td>
<td>QTXACLMT</td>
<td>NO</td>
<td>Integer</td>
<td>RLF limit in CPU milliseconds</td>
</tr>
<tr>
<td>RLFCPULIMITU</td>
<td>QTXACLMT</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>RLF limit in CPU seconds</td>
</tr>
<tr>
<td>RLFCPUUSED</td>
<td>QTXACHUS</td>
<td>NO</td>
<td>Integer</td>
<td>Highest CPU milliseconds used</td>
</tr>
<tr>
<td>RLFCPUUSEDU</td>
<td>QTXACHUS</td>
<td>NO</td>
<td>Decimal(15,6)</td>
<td>Highest CPU seconds used</td>
</tr>
<tr>
<td>SUSPLATCH</td>
<td>QTXASLAT</td>
<td>NO</td>
<td>Real</td>
<td>Latch suspends</td>
</tr>
<tr>
<td>SUSPOTHER</td>
<td>QTXASOTH</td>
<td>NO</td>
<td>Real</td>
<td>Other suspends</td>
</tr>
<tr>
<td>LOCKREQS</td>
<td>QTXALOCK</td>
<td>NO</td>
<td>Real</td>
<td>Lock requests</td>
</tr>
<tr>
<td>UNLOCKREQS</td>
<td>QTXAUNLK</td>
<td>NO</td>
<td>Real</td>
<td>Unlock requests</td>
</tr>
<tr>
<td>QUERYREQS</td>
<td>QTXAQRY</td>
<td>NO</td>
<td>Real</td>
<td>Lock query requests</td>
</tr>
<tr>
<td>CHNGREQS</td>
<td>QTXACHG</td>
<td>NO</td>
<td>Real</td>
<td>Lock change requests</td>
</tr>
<tr>
<td>IRLMREQS</td>
<td>QTXAIRLM</td>
<td>NO</td>
<td>Real</td>
<td>Other IRLM requests</td>
</tr>
<tr>
<td>CLAIMREQ</td>
<td>QTXAACLNO</td>
<td>NO</td>
<td>Real</td>
<td>Number of claim requests</td>
</tr>
<tr>
<td>CLAIMREQUN</td>
<td>QTXAACLUN</td>
<td>NO</td>
<td>Real</td>
<td>Number of unsuccessful claim requests</td>
</tr>
<tr>
<td>DRAINREQ</td>
<td>QTXADRNO</td>
<td>NO</td>
<td>Real</td>
<td>Number of drain requests</td>
</tr>
<tr>
<td>DRAINREQUN</td>
<td>QTXADRUN</td>
<td>NO</td>
<td>Real</td>
<td>Number of unsuccessful drain requests</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>QX - SQL Statement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SELECTS</td>
<td>QPSELECT</td>
<td>NO</td>
<td>Real</td>
<td>Number of SELECT statements</td>
</tr>
<tr>
<td>INSERTS</td>
<td>QPINSRT</td>
<td>NO</td>
<td>Real</td>
<td>Number of INSERT statements</td>
</tr>
<tr>
<td>UPDATES</td>
<td>QPUPDTE</td>
<td>NO</td>
<td>Real</td>
<td>Number of UPDATE statements</td>
</tr>
<tr>
<td>DELETES</td>
<td>QPDELETE</td>
<td>NO</td>
<td>Real</td>
<td>Number of DELETE statements</td>
</tr>
<tr>
<td>DESCRIBES</td>
<td>QPDESC</td>
<td>NO</td>
<td>Real</td>
<td>Number of DESCRIBE statements</td>
</tr>
<tr>
<td>PREPARES</td>
<td>QPPREP</td>
<td>NO</td>
<td>Real</td>
<td>Number of PREPARE statements</td>
</tr>
<tr>
<td>OPENS</td>
<td>QPOPEN</td>
<td>NO</td>
<td>Real</td>
<td>Number of OPEN statements</td>
</tr>
<tr>
<td>FETCHES</td>
<td>QPFETCH</td>
<td>NO</td>
<td>Real</td>
<td>Number of FETCH statements</td>
</tr>
<tr>
<td>CLOSES</td>
<td>QPCLOSE</td>
<td>NO</td>
<td>Real</td>
<td>Number of CLOSE statements</td>
</tr>
<tr>
<td>LOCKTBL</td>
<td>QPLOCK</td>
<td>NO</td>
<td>Real</td>
<td>Number of LOCK TABLE statements</td>
</tr>
<tr>
<td>SQLCALL</td>
<td>QPCALL</td>
<td>NO</td>
<td>Real</td>
<td>SQL call statements executed</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOULONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOULONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>EXECLOCATION_L</td>
<td>QPACLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the remote location where package was executed (blank if executed locally)</td>
</tr>
<tr>
<td>COLLECTIONID_L</td>
<td>QPACCOLN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the package collection ID</td>
</tr>
</tbody>
</table>
### Accounting Accelerator detail and summary tables (DMRAXxxx)

One accounting record is created from each SMF 101 record that is received.

**Note**

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

### Table 155: DMRAXDTL/DMRAXSUM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>Char (8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>Char (8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM101SID</td>
<td>Char (4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM101SSI</td>
<td>Char (4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>QWHC - Correlation Header</td>
<td>QWHCPLAN</td>
<td>Char (8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>Char (8)</td>
<td>Authorization ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>Char (8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>Char (12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>Char (8)</td>
<td>Original primary authorization ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>Char (8)</td>
<td>One of the following connection types, based on the value in QWHCATYP:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ DRDA (QWHCRUW)—DRDA protocol</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ CICS (QWHCCICS)—CICS attach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ DB2 CALL(QWHCDB2C)—DB2 call attach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ DB2 UTIL (QWHCUTIL)—DB2 utilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ DLIBATCH (QWHCDLIB)—DL/I batch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ IMS-BMP (QWHCIMSB)—IMS attach BMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ IMS-CTL (QWHCICLT)—IMS control region</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ IMS-MPP (QWHCIMSM)—IMS attach MPP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ RRSAF AT (QWHCTRRS)—RRSAF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ TM-BATCH (QWHCTBMP)—IMS transaction BMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ TSO (QWHCTSO)—TSO foreground and background</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>Char (22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This field applies to the CICS Attachment Facility, RRSAF, and database access threads. For database access threads, this is the value that is received from the requester system. If the connection to the requester system is through DB2 private protocols, this accounting value is identical to the accounting value used at the requester system. If the connection to the requester system is through DRDA protocols, this accounting value is determined from the first 22 bytes of the correlation token (CRRTKN) value of the access relational database (ACCRDB) command received from the requester system during connect processing.</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>ENDUSERID</td>
<td>QWHCEUID</td>
<td>Char (16)</td>
<td>Optional work station end user ID. This ID can be different from the authorization ID used to connect to DB2. This field contains blanks if the client did not suppl this information.</td>
</tr>
<tr>
<td>ENDUSERTX</td>
<td>QWHCEUTX</td>
<td>Char (32)</td>
<td>Optional end user's transaction or application name that identifies the application that is currently running, not the product that is used to run the application. This field contains blanks if the client did not suppl this information.</td>
</tr>
<tr>
<td>ENDUSERWN</td>
<td>QWHCEUWN</td>
<td>Char (18)</td>
<td>Optional end user's workstation name. This field contains blanks if the client did not suppl this information.</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>Integer</td>
<td>Active trace mask.</td>
</tr>
<tr>
<td>PSTNUMBER</td>
<td>QWHCCV</td>
<td>Char (4)</td>
<td>PST number - IMS only.</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>Char (8)</td>
<td>PSB name - IMS only.</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>Char (4)</td>
<td>Transaction code - CICS onl.</td>
</tr>
<tr>
<td>CORRNAME</td>
<td>QWHCCV</td>
<td>Char (8)</td>
<td>User ID, Jobname, CICS TRNID, or IMS PSBNAME.</td>
</tr>
<tr>
<td>CONTEXTNAME</td>
<td>QWHCTCXT</td>
<td>Varchar (128)</td>
<td>Trusted context name.</td>
</tr>
<tr>
<td>ROLENAME</td>
<td>QWHCROLE</td>
<td>Varchar (128)</td>
<td>Role name associated with authid.</td>
</tr>
<tr>
<td>ORIGAPPLAUTH</td>
<td>QWHCOAUD</td>
<td>Varchar (128)</td>
<td>Original application user ID.</td>
</tr>
<tr>
<td>QWHSS - Standard Header</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>Char (6)</td>
<td>Version of DB2 that created the record. For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBBV because the field was not defined.</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>Char (8)</td>
<td>LUWID - Network ID.</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>Char (8)</td>
<td>LUWID - Logical unit name.</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>Char (6)</td>
<td>LUWID - Instance ID.</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>Real</td>
<td>LUWID - Commit count.</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWHSSTCK</td>
<td>Char (4)</td>
<td>Year record was created.</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>Char (16)</td>
<td>Local location name (DB2 subsystem ID if not defined).</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>Integer</td>
<td>IFCID sequence number.</td>
</tr>
<tr>
<td>QWAC - Accounting Record Instrumentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>Time stamp</td>
<td>Date and time record was created</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>Date</td>
<td>Date record was created</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>Char (2)</td>
<td>Month record was created</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>Char (2)</td>
<td>Day record was created</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>Time</td>
<td>Time record was created</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>Char (2)</td>
<td>Hour record was created</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>Smallint</td>
<td>Relative da of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>Char (3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>NETWORKID</td>
<td>QWACNID</td>
<td>Char (16)</td>
<td>Network ID</td>
</tr>
</tbody>
</table>

**QWHA - Data Sharing**

| GROUPNAME                      | QWHADSGN      | Char (8)   | Data sharing group name |
| MEMBERNAME                     | QWHAMEMN      | Char (8)   | Data sharing member name |

**QPAC - General Package Accounting**

| FIRSTPKG                       | QPACPCKID     | Char (18)  | First package or DBRM executed (planname if accounting class 7 not active) |
| REQLOCATION_L                 | QWHDRQNM      | Varchar (128) | Long name version of the distributed transaction requestor location |

**Q8AC - Accounting Accelerator**

<p>| PRODUCTID                      | Q8ACPRID      | Char (8)   | Accelerator product ID |
| CONNECTS                       | Q8ACCONN      | BIGINT     | Number of Accelerator connects |
| REQUESTS                       | Q8ACREQ       | BIGINT     | Number of Accelerator requests |
| REQUEST_Timeouts               | Q8ACTOUT      | BIGINT     | Number of Accelerator request timeouts |
| FAILED_REQUESTS                | Q8ACFAIL      | BIGINT     | Number of Accelerator failed requests |
| BYTES_SENT                     | Q8ACBYTES     | BIGINT     | Number of bytes sent |
| BYTES_RETURNED                 | Q8ACBYTESR    | BIGINT     | Number of bytes returned |
| MSGS_SENT                      | Q8ACMSG       | BIGINT     | Number of messages sent |
| MSGS_RETURNED                  | Q8ACMSGR      | BIGINT     | Number of messages returned |
| BLOCKS_SENT                    | Q8ACBLKS      | BIGINT     | Number of blocks sent |
| BLOCKS_RETURNED                | Q8ACBLKRS     | BIGINT     | Number of blocks returned |</p>
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROWS_SENT</td>
<td>Q8ACROWS</td>
<td>BIGINT</td>
<td>Number of rows sent</td>
</tr>
<tr>
<td>ROWS_RETURNED</td>
<td>Q8ACROWR</td>
<td>BIGINT</td>
<td>Number of rows returned</td>
</tr>
<tr>
<td>CPU_TIME</td>
<td>Q8ACSCPU</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's CPU time</td>
</tr>
<tr>
<td>ELAPSED_TIME</td>
<td>Q8ACSELA</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's elapsed time</td>
</tr>
<tr>
<td>TCPIP_CPU_TIME</td>
<td>Q8ACTCPU</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's TCP/IP CPU time</td>
</tr>
<tr>
<td>TCPIP_ELAP_TIME</td>
<td>Q8ACTELEA</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's TCP/IP CPU elapsed time</td>
</tr>
<tr>
<td>ACCUM_CPU_TIME</td>
<td>Q8ACACPU</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's accumulated CPU time</td>
</tr>
<tr>
<td>ACCUM_ELAP_TIME</td>
<td>Q8ACAELA</td>
<td>Decimal (15,6)</td>
<td>Accelerator server's accumulated elapsed time</td>
</tr>
<tr>
<td>ACCUM_WAIT_TIME</td>
<td>Q8ACAWAT</td>
<td>Decimal (15,6)</td>
<td>Accumulated wait time</td>
</tr>
<tr>
<td>NAME_L</td>
<td>Q8ACNAME</td>
<td>Varchar (128)</td>
<td>Accelerator server name</td>
</tr>
</tbody>
</table>

### DB2 audit tables

This section provides detailed information about each of the records in the Performance Reporter performance data tables you can use to produce audit reports.

The audit records are stored in the following tables.

- “Audit summary table (DMRAUSUM)” on page 438
- “Authorization failures table (DMRAUFAL)” on page 441
- “Authorization control table (DMRAUGRV)” on page 444
- “DDL access table (DMRAUDDL)” on page 447
- “DML access table (DMRAUDML)” on page 450
- “DML at BIND table (DMRAUDMB)” on page 453
- “Authorization ID change table (DMRAUCHG)” on page 456
- “Utility access table (DMRAUUTL)” on page 461
- “Audit command table (DMRAUCMD)” on page 464
- “Audit authorization table (DMRAUADM)” on page 467
- “Audit trace table (DMRAUTRC)” on page 470
Audit summary table (DMRAUSUM)

The audit summary table (DMRAUSUM) is used to produce the Audit Summary and Audit Detail Reports.

It requires audit classes 1 through 8 and counts occurrences of IFCIDs 23, 24, 25, 55, 83, 87, 140-145, and 169. It also contains category and type information. Table 156 on page 438 describes the DMRAUSUM table.

**Note**
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 156: DMRAUSUM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLSCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>AUTHFAIL</td>
<td>QW0140</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of authorization failures</td>
</tr>
<tr>
<td>AUTHCNTL</td>
<td>QW0141</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of explicit GRANTs / REVOKEs</td>
</tr>
<tr>
<td>AUTHGRANTS</td>
<td>QW0141AC</td>
<td>NO</td>
<td>Smallint</td>
<td>Count of explicit GRANTs</td>
</tr>
<tr>
<td>AUTHREVOKE</td>
<td>QW0141AC</td>
<td>NO</td>
<td>Smallint</td>
<td>Count of explicit REVOKEs</td>
</tr>
<tr>
<td>DDLACCESS</td>
<td>QW0142</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of CREATEs / DROPs / ALTERs</td>
</tr>
<tr>
<td>DMLREADS</td>
<td>QW0144</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of audited first READs</td>
</tr>
<tr>
<td>DMLWRITES</td>
<td>QW0143</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of audited first WRITEs</td>
</tr>
<tr>
<td>DMLATBIND</td>
<td>QW0145</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of access detected at BIND</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>ISOLATION LEVEL</td>
<td>QW0145IS</td>
<td>NO</td>
<td>Char(1)</td>
<td>Statement isolation level</td>
</tr>
<tr>
<td>AUTHCHANGE</td>
<td>QW0055 QW0083 QW0087 QW00169</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of AUTHID changes</td>
</tr>
<tr>
<td>AUDITUTILITY</td>
<td>QW0023-25</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of utility trace records (phases)</td>
</tr>
<tr>
<td>AUDITUTILRUN</td>
<td>QW0025</td>
<td>YES</td>
<td>Smallint</td>
<td>Count of utilities executed</td>
</tr>
<tr>
<td>AUDITCATEGORY</td>
<td>QW00140-145 QW0055 QW0083 QW0087 QW00169 QW0023-25</td>
<td>YES</td>
<td>Char(13)</td>
<td>Description of audit category</td>
</tr>
<tr>
<td>AUDITTYPE</td>
<td>QW00140-145 QW0055 QW0083 QW0087 QW00169 QW0023-25</td>
<td>YES</td>
<td>Char(16)</td>
<td>Supplementary description of audited authorization</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
</tbody>
</table>

DB2 audit tables

440  MainView for DB2 Performance Reporter User Guide
Authorization failures table (DMRAUFAL)

The authorization failures table (DMRAUFAL) is used to produce the Authorization Failures Report.

It requires audit class 1 and defines all the fields in IFCID 140. Table 157 on page 441 describes the DMRAUFAL table.

---

**Note**

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.)

Alternatively, you can delete any unwanted columns individually before creating the table.

---

### Table 157: DMRAUFAL columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN QWHSSUBV</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLANNNAME</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMNN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP. For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>PRIVILEGECHKD</td>
<td>QW0140PR</td>
<td>YES</td>
<td>Char(16)</td>
<td>Privilege checked</td>
</tr>
<tr>
<td>OBJECTTYPE</td>
<td>QW0140OB</td>
<td>YES</td>
<td>Char(10)</td>
<td>Object type</td>
</tr>
<tr>
<td>SOURCEOWNER</td>
<td>QW0140SC</td>
<td>YES</td>
<td>Char(8)</td>
<td>Source object owner</td>
</tr>
<tr>
<td>SOURCEOBJECT</td>
<td>QW0140SN</td>
<td>YES</td>
<td>Char(18)</td>
<td>Source object name</td>
</tr>
<tr>
<td>TARGETOWNER</td>
<td>QW0140TC</td>
<td>YES</td>
<td>Char(8)</td>
<td>Target object owner</td>
</tr>
<tr>
<td>TARGETOBJECT</td>
<td>QW0140TN</td>
<td>YES</td>
<td>Char(18)</td>
<td>Target object name</td>
</tr>
<tr>
<td>AUTHIDCHKD</td>
<td>QW0140UR</td>
<td>YES</td>
<td>Char(8)</td>
<td>AUTHID checked</td>
</tr>
<tr>
<td>IDTYPE</td>
<td>QW0140AT</td>
<td>NO</td>
<td>Char(1)</td>
<td>One of the following identifier types: blank - primary or secondary authorization ID L - role</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>SQLTEXTLEN</td>
<td>QW0140TX</td>
<td>NO</td>
<td>Integer</td>
<td>SQL text length</td>
</tr>
<tr>
<td>SQLTEXT</td>
<td>QW0140TX</td>
<td>NO</td>
<td>Varchar(4000)</td>
<td>SQL text</td>
</tr>
<tr>
<td>MLSROWRID</td>
<td>QW0140ID</td>
<td>NO</td>
<td>Char(5)</td>
<td>RID of the row being updated or deleted in an MLS table</td>
</tr>
<tr>
<td>MLSROWSEC</td>
<td>QW0140RL</td>
<td>NO</td>
<td>Char(8)</td>
<td>Security label for an MLS table row</td>
</tr>
<tr>
<td>ACEEUTOKN</td>
<td>QW0140UT</td>
<td>NO</td>
<td>Char(80)</td>
<td>Aece utoken</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
</tbody>
</table>
## Authorization control table (DMRAUGRV)

The authorization control table (DMRAUGRV) is used to produce the Authorization Control - GRANTS/REVOKEs Report.

It requires audit class 2 and defines all the fields in IFCID 141. Table 158 on page 445 describes the DMRAUFAL table.
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOLNG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 158: DMRAUGRV columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record</td>
</tr>
<tr>
<td></td>
<td>QWHSSUBV</td>
<td></td>
<td></td>
<td>For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLANNNAME</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>AUTHIDGR</td>
<td>QW0141OR</td>
<td>YES</td>
<td>Char(8)</td>
<td>ID of Grantor or Revoker</td>
</tr>
<tr>
<td>ACCESSTYPE</td>
<td>QW0141AC</td>
<td>YES</td>
<td>Char(6)</td>
<td>Access type - GRANT/REVOKE</td>
</tr>
<tr>
<td>OBJECTTYPE</td>
<td>QW0141OB</td>
<td>YES</td>
<td>Char(10)</td>
<td>Object type</td>
</tr>
<tr>
<td>SQLCODE</td>
<td>QW0141CO</td>
<td>YES</td>
<td>Integer</td>
<td>SQL error code</td>
</tr>
<tr>
<td>GRANTREASONCD</td>
<td>QW0141RE</td>
<td>NO</td>
<td>Char(1)</td>
<td>Reason for GRANT - short code</td>
</tr>
<tr>
<td>GRANTREASON</td>
<td>QW0141RE</td>
<td>YES</td>
<td>Char(8)</td>
<td>Reason for GRANT</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>SQLTEXTLEN</td>
<td>QW0141TX</td>
<td>NO</td>
<td>Integer</td>
<td>SQL text length</td>
</tr>
<tr>
<td>SQLTEXT</td>
<td>QW0141TX</td>
<td>YES</td>
<td>Varchar(4000)</td>
<td>SQL text</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>IDTYPE</td>
<td>QW0141OT</td>
<td>NO</td>
<td>Char(1)</td>
<td>One of the following identifier types:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Blank - primary or secondary authorization ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- L - role</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMR_AUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOULONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMR_AUTOULONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
</tbody>
</table>

**DDL access table (DMRAUDDDL)**

The DDL access table (DMRAUDDDL) is used to produce the DDL Access Report.

It requires audit class 3 and defines all the fields in IFCID 142. Table 159 on page 448 describes the DMRAUDDDL table.
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.)

Alternatively, you can delete any unwanted columns individually before creating the table.

Table 159: DMRAUDDL columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN QWHSSUBV</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(8)</td>
<td>Time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>DBID</td>
<td>QW0142DB</td>
<td>YES</td>
<td>Smallint</td>
<td>Database ID</td>
</tr>
<tr>
<td>TABLEID</td>
<td>QW0142OB</td>
<td>YES</td>
<td>Smallint</td>
<td>Table object ID</td>
</tr>
<tr>
<td>DBNAME</td>
<td>QW0142DB</td>
<td>YES</td>
<td>Char(8)</td>
<td>Database name</td>
</tr>
<tr>
<td>TABLENAME</td>
<td>QW0142TN</td>
<td>YES</td>
<td>Char(18)</td>
<td>Table name</td>
</tr>
<tr>
<td>TABLEOWNER</td>
<td>QW0142OW</td>
<td>YES</td>
<td>Char(8)</td>
<td>Table owner</td>
</tr>
<tr>
<td>TABLECREATOR</td>
<td>QW0142CR</td>
<td>YES</td>
<td>Char(8)</td>
<td>Table creator</td>
</tr>
<tr>
<td>STMTTTYPE</td>
<td>QW0142AC</td>
<td>YES</td>
<td>Char(8)</td>
<td>SQL statement type</td>
</tr>
<tr>
<td>IDTYPE</td>
<td>QW0142OR</td>
<td>NO</td>
<td>Char(1)</td>
<td>One of the following identifier types:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ Blank - primary or secondary authorization ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ L - role</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUVV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
</tbody>
</table>
### Performance Report Column Name

<table>
<thead>
<tr>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHISISEQ</td>
<td>NO</td>
<td>Integer</td>
</tr>
<tr>
<td>SQLTEXTLEN</td>
<td>QW0142TX</td>
<td>NO</td>
<td>Integer</td>
</tr>
<tr>
<td>SQLTEXT</td>
<td>QW0142TX</td>
<td>YES</td>
<td>Varchar(4000)</td>
</tr>
<tr>
<td>SECLABEL</td>
<td>QW0142SL</td>
<td>NO</td>
<td>Char(8)</td>
</tr>
<tr>
<td>MULTISEC</td>
<td>QW0142ML</td>
<td>NO</td>
<td>Char(1)</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
</tr>
<tr>
<td>DMRAUTOOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
</tr>
<tr>
<td>TABLENAME_L</td>
<td>QW0142TN</td>
<td>NO</td>
<td>Varchar(128)</td>
</tr>
<tr>
<td>TABLEOWNER_L</td>
<td>QW0142OW</td>
<td>NO</td>
<td>Varchar(128)</td>
</tr>
</tbody>
</table>

### DML access table (DMRAUDML)

The DML access table (DMRAUDML) is used to produce the DML Access Report.

---

**MainView for DB2 Performance Reporter User Guide**

450
It requires audit classes 4 and 5 and defines all the fields in IFCIDs 143 and 144. Table 160 on page 451 describes the DMRAUDML table.

### Note

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

### Table 160: DMRAUDML columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPI2</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>DMLTYPE</td>
<td>QW0143 QW0144</td>
<td>YES</td>
<td>Char(10)</td>
<td>DML type - first READ / WRITE</td>
</tr>
<tr>
<td>DBID</td>
<td>QW0143 QW0144DB</td>
<td>YES</td>
<td>Smallint</td>
<td>Internal database ID</td>
</tr>
<tr>
<td>PSID</td>
<td>QW0143 QW0144PS</td>
<td>YES</td>
<td>Smallint</td>
<td>Internal page set object ID</td>
</tr>
<tr>
<td>TABLEOBID</td>
<td>QW0143 QW0144OB</td>
<td>YES</td>
<td>Smallint</td>
<td>Internal table object ID</td>
</tr>
<tr>
<td>DBNAME</td>
<td>QW0143 QW0144DB</td>
<td>YES</td>
<td>Char(8)</td>
<td>Database name</td>
</tr>
<tr>
<td>PSNAME</td>
<td>QW0143 QW0144PS</td>
<td>YES</td>
<td>Char(8)</td>
<td>Page set name</td>
</tr>
<tr>
<td>UROIDLOGRBA</td>
<td>QW0143 QW0144UR</td>
<td>YES</td>
<td>Char(6)</td>
<td>Unit of recovery ID (LOG RBA)</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>active trace mask</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSIDEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
</tbody>
</table>

**DML at BIND table (DMRAUDMB)**

The DML at BIND table (DMRAUDMB) is used to produce the DML at BIND Report.

It requires audit class 6 and defines all the fields in IFCID 145. Table 161 on page 454 describes the DMRAUDMB table.
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOng, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

### Table 161: DMRAUDMB columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record</td>
</tr>
<tr>
<td></td>
<td>QWHSSUBV</td>
<td></td>
<td></td>
<td>For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP. For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>BINDLOCATION</td>
<td>QW0145LN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Bind location</td>
</tr>
<tr>
<td>COLLECTIONID</td>
<td>QW0145PC</td>
<td>YES</td>
<td>Char(18)</td>
<td>Package collection ID</td>
</tr>
<tr>
<td>PROGRAM</td>
<td>QW0145PN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Program name</td>
</tr>
<tr>
<td>PRECOMPTIME</td>
<td>QW0145TS</td>
<td>YES</td>
<td>Char(8)</td>
<td>Precompiler time stamp</td>
</tr>
<tr>
<td>STMTNO</td>
<td>QW0145SN</td>
<td>YES</td>
<td>Integer</td>
<td>Statement number</td>
</tr>
<tr>
<td>STMTTYPE</td>
<td>QW0145ST</td>
<td>YES</td>
<td>Char(10)</td>
<td>SQL statement type</td>
</tr>
<tr>
<td>DBID</td>
<td>QW0145DB</td>
<td>YES</td>
<td>Smallint</td>
<td>Database ID</td>
</tr>
<tr>
<td>TABLEID</td>
<td>QW0145OB</td>
<td>YES</td>
<td>Smallint</td>
<td>Table object ID</td>
</tr>
<tr>
<td>ISOLATION LEVEL</td>
<td>QW0145IS</td>
<td>NO</td>
<td>Char(1)</td>
<td>Statement isolation level</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>SQLTEXTLEN</td>
<td>QW0145TX</td>
<td>NO</td>
<td>Integer</td>
<td>SQL text length</td>
</tr>
<tr>
<td>SQLTEXT</td>
<td>QW0145TX</td>
<td>YES</td>
<td>Varchar(4000)</td>
<td>SQL text</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>BINDLOCATION_L</td>
<td>QW0145LN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the bind location</td>
</tr>
<tr>
<td>COLLECTIONID_L</td>
<td>QW0145PC</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the package collection ID</td>
</tr>
<tr>
<td>PROGRAM_L</td>
<td>QW0145PN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the program name</td>
</tr>
</tbody>
</table>

### Authorization ID change table (DMRAUCHG)

The authorization ID change table (DMRAUCHG) is used to produce the Authorization ID Change Report.

It requires audit class 7 and defines all the fields in IFCIDs 55, 83, 87, and 169. Table 162 on page 457 describes the DMRAUCHG table.
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 162: DMRAUCHG columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN, QWHSSUBV</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>AUTHIDCHGTYPE</td>
<td>QW0055 / QW0083 / QW0087 / QW00169</td>
<td>YES</td>
<td>Char(17)</td>
<td>AUTHID change type</td>
</tr>
<tr>
<td>CURRENTAUTHID</td>
<td>QW0055OI / QW0169AU</td>
<td>YES</td>
<td>Char(8)</td>
<td>AUTHID change - current AUTHID</td>
</tr>
<tr>
<td>NEWAUTHID</td>
<td>QW0055NI / QW0169NE</td>
<td>YES</td>
<td>Char(8)</td>
<td>AUTHID change - new AUTHID</td>
</tr>
<tr>
<td>IDTYPE</td>
<td>QW0169ID</td>
<td>NO</td>
<td>Char(1)</td>
<td>One of the following identifier types:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ A - authorization ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ L - location alias</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ D - database alias</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ S - trusted context system AUTHID</td>
</tr>
<tr>
<td>SQLAUTHID</td>
<td>QW0083QD / QW0087QD</td>
<td>YES</td>
<td>Char(8)</td>
<td>SQL AUTHID - identification / signon</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ORIGPRIMAUTH</td>
<td>QW0083OP / QW0087OP / QWHCOPID</td>
<td>YES</td>
<td>Char(8)</td>
<td>AUTHID change - original ID</td>
</tr>
<tr>
<td>STMTSTATUS</td>
<td>QW0055ST / QW0083AD / QW0087AD</td>
<td>YES</td>
<td>Char(8)</td>
<td>AUTHID change status</td>
</tr>
<tr>
<td>SECAUTHCOUNT</td>
<td>QW0083SA / QW0087SA</td>
<td>NO</td>
<td>Smallint</td>
<td>Number of secondary AUTHIDs</td>
</tr>
<tr>
<td>SECAUTH1</td>
<td>QW0083SA / QW0087SA</td>
<td>YES</td>
<td>Char(8)</td>
<td>First secondary AUTHID</td>
</tr>
<tr>
<td>SECAUTH2</td>
<td>QW0083SA / QW0087SA</td>
<td>YES</td>
<td>Char(8)</td>
<td>Second secondary AUTHID</td>
</tr>
<tr>
<td>SECAUTH3</td>
<td>QW0083SA / QW0087SA</td>
<td>YES</td>
<td>Char(8)</td>
<td>Third secondary AUTHID</td>
</tr>
<tr>
<td>AUTHXLATTYPETYPE</td>
<td>QW0169TY</td>
<td>YES</td>
<td>Char(8)</td>
<td>Distributed AUTHID inbound / outbound connection messages</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>AUTHLOCATION</td>
<td>QW0169LO</td>
<td>NO</td>
<td>Char(16)</td>
<td>Distributed AUTHID change responding location</td>
</tr>
<tr>
<td>AUTHLUNAME</td>
<td>QW0169LU</td>
<td>NO</td>
<td>Char(8)</td>
<td>Distributed AUTHID change responding luname</td>
</tr>
<tr>
<td>SECAUTHLENS</td>
<td>QW0083SL / QW0087SL</td>
<td>NO</td>
<td>Smallint</td>
<td>Length of secondary AUTHID</td>
</tr>
<tr>
<td>SECAUTHVAR</td>
<td>QW0083SA / QW0087SA</td>
<td>NO</td>
<td>Varchar(100)</td>
<td>String of secondary AUTHID</td>
</tr>
<tr>
<td>ACEEUTOKKNID</td>
<td>QW0140UT</td>
<td>NO</td>
<td>Char(80)</td>
<td>Acee utoken</td>
</tr>
<tr>
<td>ACEEUTOKNSO</td>
<td>QW0083UT</td>
<td>NO</td>
<td>Char(80)</td>
<td>Acee utoken</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>IDTYPE</td>
<td>QW0169ID</td>
<td>NO</td>
<td>Char(1)</td>
<td>Identifier type, which can be</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ A— authorization ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ L— location alias</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>■ D— database alias</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>CURRENTAUTHID_L</td>
<td>QW0055OI / QW0169AU</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the AUTHID change - current AUTHID</td>
</tr>
<tr>
<td>NEWAUTHID_L</td>
<td>QW0055NI / QW0169NE</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the AUTHID change - new AUTHID</td>
</tr>
<tr>
<td>SQLAUTHID_L</td>
<td>QW0083QD / QW0087QD</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the SQL AUTHID - identification / signon</td>
</tr>
<tr>
<td>SECAUTH1_L</td>
<td>QW0083SA / QW0087SA</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the first secondary AUTHID</td>
</tr>
<tr>
<td>SECAUTH2_L</td>
<td>QW0083SA / QW0087SA</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Second secondary AUTHID long name version of the</td>
</tr>
<tr>
<td>SECAUTH3_L</td>
<td>QW0083SA / QW0087SA</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the third secondary AUTHID</td>
</tr>
</tbody>
</table>
Utility access table (DMRAUUTL)

The utility access table (DMRAUUTL) is used to produce the Utility Access Report.

It requires audit class 8 and defines all the fields in IFCIDs 23, 24, and 25. Table 163 on page 461 describes the DMRAUUTL table.

Note
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLOLNG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 163: DMRAUUTL columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>UTILITYID</td>
<td>QW0023 / QW0024 / QW0025ID</td>
<td>YES</td>
<td>Char(16)</td>
<td>Utility ID</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DBID</td>
<td>QW0023 / QW0024 / QW0025DB</td>
<td>YES</td>
<td>Smallint</td>
<td>Database DBID</td>
</tr>
<tr>
<td>PSID</td>
<td>QW0023 / QW0024 / QW0025PD</td>
<td>YES</td>
<td>Smallint</td>
<td>Page set PSID</td>
</tr>
<tr>
<td>UTILITYNAME</td>
<td>QW0023 / QW0024 / QW0025NM</td>
<td>YES</td>
<td>Char(8)</td>
<td>Utility name</td>
</tr>
<tr>
<td>UTILITYPHASE</td>
<td>QW0023 / QW0024 / QW0025PH</td>
<td>YES</td>
<td>Char(8)</td>
<td>Utility phase</td>
</tr>
<tr>
<td>PREVITEMCOUNT</td>
<td>QW0023 / QW0024 / QW0025DN / QW0025DN</td>
<td>YES</td>
<td>Integer</td>
<td>Number of items in the previous phase</td>
</tr>
<tr>
<td>ITEMTYPE</td>
<td>QW0023 / QW0024 / QW0025NM QW0025PH</td>
<td>YES</td>
<td>Char(13)</td>
<td>Item type</td>
</tr>
<tr>
<td>DBNAME</td>
<td>QW0023 / QW0024 / QW0025DB</td>
<td>YES</td>
<td>Char(8)</td>
<td>Database name</td>
</tr>
<tr>
<td>PSNAME</td>
<td>QW0023 / QW0024 / QW0025PD</td>
<td>YES</td>
<td>Char(8)</td>
<td>Page set name</td>
</tr>
<tr>
<td>LUWIDNID</td>
<td>QWHSNID</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - network ID</td>
</tr>
<tr>
<td>LUWIDLUNM</td>
<td>QWHSLUNM</td>
<td>NO</td>
<td>Char(8)</td>
<td>LU of Work - logical unit name</td>
</tr>
<tr>
<td>LUWIDINST</td>
<td>QWHSLUUV</td>
<td>NO</td>
<td>Char(6)</td>
<td>LU of Work - instance value</td>
</tr>
<tr>
<td>LUWIDCOMIT</td>
<td>QWHSLUCC</td>
<td>NO</td>
<td>Smallint</td>
<td>LU of Work - COMMIT count</td>
</tr>
<tr>
<td>TRACEMASK</td>
<td>QWHSMTN</td>
<td>NO</td>
<td>Integer</td>
<td>Active trace mask</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLO) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
</tbody>
</table>
### Audit command table (DMRAUCMD)

The audit command table (DMRAUCMD) contains the text of DB2 commands that were entered.

It requires trace class 10 and defines all fields in IFCID 90. Table 164 on page 464 describes the DMRAUCMD table.

**Note**

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.)

Alternatively, you can delete any unwanted columns individually before creating the table.

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
</tbody>
</table>

Chapter 7  Performance data tables  465
<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>CONTEXTNAME_L</td>
<td>QWHCTCXT</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Trusted context name</td>
</tr>
<tr>
<td>ROLENAME_L</td>
<td>QWHCROLE</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Associated role name</td>
</tr>
<tr>
<td>ORIGAPPLUSER_L</td>
<td>QWHCOAUD</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Original application user ID</td>
</tr>
<tr>
<td>CMDTEXT_L</td>
<td>QW0090CT</td>
<td>NO</td>
<td>VARCHAR(2000)</td>
<td>Command text</td>
</tr>
</tbody>
</table>
Audit authorization table (DMRAUADM)

The audit authorization table (DMRAUADM) contains information used to audit administrative authorities.

It requires one of the following conditions to be true:

- Audit class 11 is on
- Audit policy category SYSADMIN is on
- Audit policy category DBADMIN is on

This table defines all fields in IFCID 361. Table 165 on page 467 describes the DMRAUADM table.

**Note**

Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.)

Alternatively, you can delete any unwanted columns individually before creating the table.

Table 165: DMRAUADM columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICISTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPIID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP For a list of connection types, see the description of CONTYPE in “Accounting detail and summary tables (DMRACxxx)” on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>CONTEXTNAME_L</td>
<td>QWHCTCXT</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Trusted context name</td>
</tr>
<tr>
<td>ROLENAME_L</td>
<td>QWHCROLE</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Associated role name</td>
</tr>
<tr>
<td>AUTHID_ROLE_L</td>
<td>QW0361ID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Authorization ID or role that has authority</td>
</tr>
<tr>
<td>ORIGAPPLUSER_L</td>
<td>QWHCDAUD</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Original application user ID</td>
</tr>
<tr>
<td>AUTHORITY_TYPE</td>
<td>QW0361AT</td>
<td>YES</td>
<td>Char(1)</td>
<td>Authority type</td>
</tr>
<tr>
<td>AUTHID_TYPE</td>
<td>QW0361AT</td>
<td>YES</td>
<td>Char(1)</td>
<td>Authorization ID type</td>
</tr>
<tr>
<td>OBJECT_TYPE</td>
<td>None</td>
<td>YES</td>
<td>char(1)</td>
<td>Object type</td>
</tr>
<tr>
<td>PRIVILEGE_CHECKD</td>
<td>QW0361PR</td>
<td>YES</td>
<td>smallint</td>
<td>Privilege checked</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSSRN</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBBV because the field was not defined.</td>
</tr>
<tr>
<td>SRC_OBJ_QUAL_L</td>
<td>QW0361SC</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Source object qualifier/owner</td>
</tr>
<tr>
<td>SRC_OBJ_NAME_L</td>
<td>QW0361SN</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Source object name</td>
</tr>
<tr>
<td>TGT_OBJ_QUAL_L</td>
<td>QW0361TC</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Target object qualifier/owner</td>
</tr>
<tr>
<td>TGT_OBJ_NAME_L</td>
<td>QW0361TN</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Target object name</td>
</tr>
<tr>
<td>OTHER_OBJ_NAME_L</td>
<td>None</td>
<td>YES</td>
<td>Varchar(128)</td>
<td></td>
</tr>
</tbody>
</table>
Audit trace table (DMRAUTRC)

The audit trace table (DMRAUTRC) records the start trace and stop trace with the audit policy option.

It defines all fields from IFCID 362. Table 166 on page 470 describes the DMRAUTRC table.

**Note**
Columns that are not used in the predefined reports are shown with NO in the Used in Report column. To delete these (or other) columns, move them after the marker column DMRAUTOCUST, and then use the MainView customization option to delete them as a group. Similarly, data sharing columns already follow the column DMRACSHARE, and long name columns follow the column DMRAUTOOLONG, both of which can be deleted as a group. (Only a few less useful columns are already defined for deletion.) Alternatively, you can delete any unwanted columns individually before creating the table.

Table 166: DMRAUTRC columns

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL_STATEMENT_L</td>
<td>QW0361SQ</td>
<td>YES</td>
<td>VARCHAR(2000)</td>
<td>SQL statement or command</td>
</tr>
</tbody>
</table>

**Table 166: DMRAUTRC columns**

<table>
<thead>
<tr>
<th>Performance Report Column Name</th>
<th>SMF Field Name</th>
<th>Used in Report</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>DMRTABLEVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the table definition</td>
</tr>
<tr>
<td>DMRVERSION</td>
<td>Not applicable</td>
<td>NO</td>
<td>Char(8)</td>
<td>Version of MainView for DB2 Performance Reporter that created or modified the row</td>
</tr>
<tr>
<td>DB2VERSION</td>
<td>QWHSRN, QWHSSUBV</td>
<td>NO</td>
<td>Char(6)</td>
<td>Version of DB2 that created the record For versions of DB2 before 8.1, a value of 0000 is used for QWHSSUBV because the field was not defined.</td>
</tr>
<tr>
<td>SYSTEMID</td>
<td>SM102SID</td>
<td>YES</td>
<td>Char(4)</td>
<td>System ID (SMF ID)</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>SM102SSI</td>
<td>YES</td>
<td>Char(4)</td>
<td>Subsystem ID (DB2 subsystem name)</td>
</tr>
<tr>
<td>PLAN</td>
<td>QWHCPLAN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Plan name</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>AUTHID</td>
<td>QWHCAID</td>
<td>YES</td>
<td>Char(8)</td>
<td>Primary authorization ID</td>
</tr>
<tr>
<td>CONNECTION</td>
<td>QWHCCN</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection name</td>
</tr>
<tr>
<td>DATETIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time stamp</td>
<td>Date/time stamp - end thread time</td>
</tr>
<tr>
<td>DATE</td>
<td>QWACESC</td>
<td>YES</td>
<td>Date</td>
<td>Date from datetime</td>
</tr>
<tr>
<td>MONTH</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Month from datetime</td>
</tr>
<tr>
<td>DAY</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Day from datetime</td>
</tr>
<tr>
<td>YEAR</td>
<td>QWACESC</td>
<td>YES</td>
<td>Char(4)</td>
<td>Year from datetime</td>
</tr>
<tr>
<td>TIME</td>
<td>QWACESC</td>
<td>YES</td>
<td>Time</td>
<td>Time from datetime</td>
</tr>
<tr>
<td>HOUR</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(2)</td>
<td>Hour from datetime</td>
</tr>
<tr>
<td>DAYOFWEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Smallint</td>
<td>Relative day of week, 1 to 7, where Monday=1 and Sunday=7</td>
</tr>
<tr>
<td>DAYOFWEEK</td>
<td>QWACESC</td>
<td>NO</td>
<td>Char(3)</td>
<td>MON, TUE, WED, THU, FRI, SAT, SUN</td>
</tr>
<tr>
<td>WEEK#</td>
<td>QWACESC</td>
<td>NO</td>
<td>Integer</td>
<td>Week number relative to the 1 January 1900 epoch</td>
</tr>
<tr>
<td>IFCIDSEQ#</td>
<td>QWHSISEQ</td>
<td>NO</td>
<td>Integer</td>
<td>IFCID sequence number</td>
</tr>
<tr>
<td>LOCATION</td>
<td>QWHSLOCN</td>
<td>YES</td>
<td>Char(16)</td>
<td>Local location name (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>GROUPNAME</td>
<td>QWHADSGN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing group name</td>
</tr>
<tr>
<td>MEMBERNAME</td>
<td>QWHAMEMN</td>
<td>YES</td>
<td>Char(8)</td>
<td>Data sharing member name</td>
</tr>
<tr>
<td>ACCTTOKN</td>
<td>QWHCTOKN</td>
<td>NO</td>
<td>Char(22)</td>
<td>Accounting token for CICS</td>
</tr>
<tr>
<td>PSTNUMBR</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>PST number - IMS only</td>
</tr>
<tr>
<td>PSBNAME</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(8)</td>
<td>PSB name - IMS only</td>
</tr>
<tr>
<td>CICSTRAN</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(4)</td>
<td>Transaction code - CICS only</td>
</tr>
<tr>
<td>CORRID</td>
<td>QWHCCV</td>
<td>NO</td>
<td>Char(12)</td>
<td>Correlation ID</td>
</tr>
<tr>
<td>ORIGPRIMID</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Char(8)</td>
<td>Original primary ID</td>
</tr>
<tr>
<td>CONTYPE</td>
<td>QWHCATYP</td>
<td>NO</td>
<td>Char(8)</td>
<td>Connection type, based on the value in QWHCATYP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For a list of connection types, see the description of CONTYPE in &quot;Accounting detail and summary tables (DMRACxxx)&quot; on page 391.</td>
</tr>
<tr>
<td>REQLOCATION</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Char(16)</td>
<td>Requestor location name</td>
</tr>
<tr>
<td>DMRACSHARE</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization to delete data sharing columns, if requested</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>DMRAUTOCUST</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one (up to DMRAUTOLONG) in the create table member are not used in the reports (NO in Used in Report column) and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>DMRAUTOLONG</td>
<td>None</td>
<td>NO</td>
<td>Integer</td>
<td>DMR column used only as a marker during MainView customization; all columns following this one in the create table member are long name versions of the corresponding fields and can be deleted as a group as a MainView customization option</td>
</tr>
<tr>
<td>AUTHID_L</td>
<td>QWHCAID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the authorization ID</td>
</tr>
<tr>
<td>ORIGPRIMID_L</td>
<td>QWHCOPID</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the original primary ID</td>
</tr>
<tr>
<td>REQLOCATION_L</td>
<td>QWHDRQNM</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the distributed transaction requestor location</td>
</tr>
<tr>
<td>LOCATION_L</td>
<td>QWHSLOCN</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Long name version of the local location (DB2 subsystem ID if not defined)</td>
</tr>
<tr>
<td>CONTEXTNAME_L</td>
<td>QWHCTCXT</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Trusted context name</td>
</tr>
<tr>
<td>ROLENAME_L</td>
<td>QWHCROLE</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Associated role name</td>
</tr>
<tr>
<td>ORIGAPPLUSER_L</td>
<td>QWHCOAUD</td>
<td>NO</td>
<td>Varchar(128)</td>
<td>Original application user ID</td>
</tr>
<tr>
<td>STATUS</td>
<td>QW0362ST</td>
<td>YES</td>
<td>Char(1)</td>
<td>Trace status</td>
</tr>
<tr>
<td>TYPE</td>
<td>QW0362DS</td>
<td>YES</td>
<td>Char(1)</td>
<td>Trace type</td>
</tr>
<tr>
<td>REASON_CODE</td>
<td>QW0362RN</td>
<td>YES</td>
<td>Integer</td>
<td>Reason code</td>
</tr>
<tr>
<td>CHECK_CAT</td>
<td>QW0362CH</td>
<td>YES</td>
<td>Char(1)</td>
<td>Checking category</td>
</tr>
<tr>
<td>VALIDATE_CAT</td>
<td>QW0362VA</td>
<td>YES</td>
<td>Char(1)</td>
<td>Validate category</td>
</tr>
<tr>
<td>OBJ_MAINT_CAT</td>
<td>QW0362OB</td>
<td>YES</td>
<td>Char(1)</td>
<td>Objmaint category</td>
</tr>
<tr>
<td>EXECUTE_CAT</td>
<td>QW0362EX</td>
<td>YES</td>
<td>Char(1)</td>
<td>Execute category</td>
</tr>
<tr>
<td>CONTEXT_CAT</td>
<td>QW0362CX</td>
<td>YES</td>
<td>Char(1)</td>
<td>Context category</td>
</tr>
<tr>
<td>SECMAINT_CAT</td>
<td>QW0362SM</td>
<td>YES</td>
<td>Char(1)</td>
<td>Secmaint category</td>
</tr>
<tr>
<td>DB2_STARTUP</td>
<td>QW0362DS</td>
<td>YES</td>
<td>Char(1)</td>
<td>DB2 startup</td>
</tr>
<tr>
<td>DATABASE_NAME</td>
<td>QW0362DB</td>
<td>YES</td>
<td>Char(8)</td>
<td>Database name</td>
</tr>
<tr>
<td>OBJECT_TYPE</td>
<td>QW0362OT</td>
<td>YES</td>
<td>Char(8)</td>
<td>Object type</td>
</tr>
<tr>
<td>MATCHING_LIKE_#</td>
<td>QW0362TT</td>
<td>YES</td>
<td>Smallint</td>
<td>Number of tables matching like clause</td>
</tr>
<tr>
<td>TABLES_TRACED_#</td>
<td>QW0362TR</td>
<td>YES</td>
<td>Smallint</td>
<td>Number of tables traced</td>
</tr>
<tr>
<td>Performance Report Column Name</td>
<td>SMF Field Name</td>
<td>Used in Report</td>
<td>Field Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>AUDIT_POLICY_L</td>
<td>QW0362AP_VAR</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Long name version of the audit policy</td>
</tr>
<tr>
<td>SCHEMA_NAME_L</td>
<td>QW0362TS_VAR</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Long name version of table schema name</td>
</tr>
<tr>
<td>TABLE_NAME_L</td>
<td>QW0362TB_VAR</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Long name version of table name</td>
</tr>
<tr>
<td>SYSADM_CAT_L</td>
<td>QW0362SA_VAR</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Sysadmin category values</td>
</tr>
<tr>
<td>DBADM_CAT_L</td>
<td>QW0362DA_VAR</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Dbadmin category values</td>
</tr>
<tr>
<td>COLLECTION_ID_L</td>
<td>QW0362CO_VAR</td>
<td>YES</td>
<td>Varchar(128)</td>
<td>Collection ID</td>
</tr>
</tbody>
</table>
BBSAMP data set members

To help you understand and use your BMC Software product easily, the BBSAMP data set contains members that you can edit for your site’s use. These members contain macros, sample JCL, sample user exit routines, and sample statements for a variety of functions.

Table 167 on page 475 describes BBSAMP sample batch report members for MainView for DB2.

Table 167: BBSAMP data set batch report members for MainView for DB2

<table>
<thead>
<tr>
<th>BBSAMP member name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPxxxxxx</td>
<td>sample members for Performance Reporter customization</td>
</tr>
<tr>
<td>DZPRxxxx</td>
<td></td>
</tr>
</tbody>
</table>
BBPARM data set members

Table 168 on page 477 lists sample members in BBPARM that can be used to generate predefined Performance Reporter accounting and statistics reports.

Table 168: BBPARM data set members for Performance Reporter

<table>
<thead>
<tr>
<th>BBPARM member name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACxxxxxx</td>
<td>SQL to generate accounting reports</td>
</tr>
<tr>
<td>AUxxxxxx</td>
<td>SQL to generate audit reports</td>
</tr>
<tr>
<td>SAxxxxxx</td>
<td>SQL to generate summary accounting reports</td>
</tr>
<tr>
<td>SSxxxxxx</td>
<td>SQL to generate summary statistic reports</td>
</tr>
<tr>
<td>STxxxxxx</td>
<td>SQL to generate statistics reports</td>
</tr>
</tbody>
</table>
SMF data collection

This section contains a brief explanation of how to collect SMF data. For more information, see the IBM DATABASE 2 Administration Guide.

Starting an accounting trace

To collect the accounting data, you must first start an accounting trace.

1 Use one of the following methods to start an accounting trace:

   ■ Modify the INSTALL parameter on the DB2 Tracing panel (DSNTIPN) to include ACCOUNTING TRACE.

       Note
       Accounting trace is included in the default parameter specification.

   ■ Issue a DB2 START TRACE command:
     -START TRACE(ACCTG) CLASS(n)

Starting a statistics trace

To collect the statistics data, you must first start a statistics trace.

1 Use one of the following methods to start a statistics trace:

   ■ Modify the INSTALL parameter on the DB2 Tracing panel (DSNTIPN) to include STATISTICS TRACE.

       Note
       Statistics trace is included in the default parameter specification.
Starting an audit trace

To collect the audit data, you must first start an audit trace.

1. Use one of the following methods to start an audit trace:

   - Modify the INSTALL parameter on the DB2 Tracing panel (DSNTIPN) to include AUDIT TRACE.

     **Note**
     Audit trace is included in the default parameter specification.

   - Issue a DB2 START TRACE command:
     - `START TRACE(AUDIT) CLASS(n)`

Auditing a table

To audit a table, you must include the AUDIT clause in the CREATE TABLE or ALTER TABLE statement.

1. Use the following SQL statements to invoke or remove auditing on tables:

<table>
<thead>
<tr>
<th>SQL statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATE TABLE AUDIT(ALL)</td>
<td>enables auditing of a table on first READ, first UPDATE, or change within a COMMIT scope, when <code>-START TRACE(AUDIT) CLASS(4,5)</code> is active</td>
</tr>
<tr>
<td>CREATE TABLE AUDIT(NONE)</td>
<td>disables auditing of a table, even if <code>-START TRACE(AUDIT) CLASS(4,5)</code> is active</td>
</tr>
<tr>
<td>CREATE TABLE(CHARGES)</td>
<td>enables auditing of a table on first INSERT, UPDATE, or DELETE within a COMMIT scope, when <code>-START TRACE(AUDIT) CLASS(5)</code> is active</td>
</tr>
</tbody>
</table>
Sample Data Collector reports

The following sample Data Collector reports are shown in this section.

- Accounting reports “Accounting reports” on page 481
- Statistics reports “Statistics reports” on page 500
- Audit reports “Audit reports” on page 528

For more information about these reports, see “Data Collector reporting facilities” on page 27.

Accounting reports

The reports in this section are sample Data Collector accounting reports.

The following reports are included:

Table 169: Data Collector accounting reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACCTACM</td>
<td>Accounting Accelerator modeling</td>
<td>“Accounting Accelerator modeling trace report (BACCTACM)” on page 482</td>
</tr>
<tr>
<td></td>
<td>trace</td>
<td></td>
</tr>
<tr>
<td>BACCTDR</td>
<td>Accounting summary long</td>
<td>“Accounting summary—long report (BACCTDR)” on page 484</td>
</tr>
<tr>
<td>BACCTSR</td>
<td>Accounting summary short</td>
<td>“Accounting summary—short report (BACCTSR)” on page 487</td>
</tr>
<tr>
<td>BACCTSRD</td>
<td>Accounting summary load</td>
<td>“Accounting summary load—short report (BACCTSRD)” on page 487</td>
</tr>
<tr>
<td>BACCTSRI</td>
<td>Accounting summary interval</td>
<td>“Accounting summary interval—short report (BACCTSRI)” on page 488</td>
</tr>
</tbody>
</table>
Accounting Accelerator modeling trace report (BACCTACM)

The following figure shows a sample of the Accounting Accelerator modeling trace report (BACCTACM).

The individual sections and field descriptions of this report are listed under “Accounting report fields” on page 175.

Figure 131: Accounting Accelerator modeling trace report (BACCTACM)
Accounting summary—long report (BACCTDR)

The following figure shows a sample of the Accounting summary—long report (BACCTDR).

The individual sections and field descriptions of this report are listed under “Accounting report fields” on page 175.

Figure 132: Accounting summary—long report (BACCTDR)
### System: SYM

**Accounting Summary - Long**

<table>
<thead>
<tr>
<th>INTERVAL FROM: 01/18/16 16:00:00</th>
<th>INTERVAL TO: 01/18/16 16:01:27.17</th>
</tr>
</thead>
</table>

**Location:** BMC_DSNDEE6

**Prime Authid:** RDHAUS

**Actual From:** 01/18/16 16:01:27.17

**Actual To:** 01/18/16 16:07:27.17

**Plan Name:** DMR1234T

**D/S Group:** DSNDEE6 MBR: DSEE6

#### Normal Term

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
<th>Abnormal Term</th>
<th>Total</th>
<th>In Doubt</th>
<th>Total</th>
<th>Drain/Claim</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>New User</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Deallocation</td>
<td>1.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>App1 Program End</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Resign</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Dbat Inactive</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Brc Commit</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Type 2 Inactive</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>End Use Short</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Blk Stor Thr</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Staleness Thr</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Data Capture**

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
<th>Data Sharing</th>
<th>Average</th>
<th>Total</th>
<th>Query Parallelism</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
</table>

**Appendix D Sample Data Collector reports**

---

**Location:** BMC_DSNDEE6

**Plan Name:** DMR1234T

**To:** 01/18/16 16:01:27.17

**Class 2 Time Distribution**

<table>
<thead>
<tr>
<th>Class 2</th>
<th>Average</th>
<th>Time</th>
<th>Total</th>
<th>Evnt</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>91%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-CPU</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSP</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTDACC</td>
<td>9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Class 3 Time Distribution**

<table>
<thead>
<tr>
<th>Class 3</th>
<th>Average</th>
<th>Time</th>
<th>Total</th>
<th>Evnt</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>91%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-CPU</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSP</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTDACC</td>
<td>9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Accounting Reports**

---

**System: SYM**

**Accounting Summary - Long**

**Interval From:** 01/18/16 16:00:00

**Interval To:** 01/18/16 16:01:27.17

**Location:** BMC_DSNDEE6

**Prime Authid:** RDHAUS

**Actual From:** 01/18/16 16:01:27.17

**Actual To:** 01/18/16 16:07:27.17

**Plan Name:** DMR1234T

**D/S Group:** DSNDEE6 MBR: DSEE6

---

**Normal Term**

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
<th>Abnormal Term</th>
<th>Total</th>
<th>In Doubt</th>
<th>Total</th>
<th>Drain/Claim</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>New User</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Deallocation</td>
<td>1.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>App1 Program End</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Resign</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Dbat Inactive</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Brc Commit</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Type 2 Inactive</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>End Use Short</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Blk Stor Thr</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Staleness Thr</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Data Capture**

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
<th>Data Sharing</th>
<th>Average</th>
<th>Total</th>
<th>Query Parallelism</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
</table>

---

**Appendix D Sample Data Collector reports**

---

**Location:** BMC_DSNDEE6

**Plan Name:** DMR1234T

**To:** 01/18/16 16:01:27.17

---
### Accounting Reports

#### BACCTDR: ACCTG SUMMARY, LONG

<table>
<thead>
<tr>
<th>Component</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>24.04</td>
<td>22.36</td>
</tr>
<tr>
<td>AGENT</td>
<td>23.36</td>
<td>0.00</td>
</tr>
<tr>
<td>NOPTRIGGER</td>
<td>22.36</td>
<td>0.00</td>
</tr>
<tr>
<td>STPROC</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Average Su

<table>
<thead>
<tr>
<th>Class 1</th>
<th>Class 2</th>
<th>Optimization</th>
<th>Average</th>
<th>Total</th>
<th>Miscellaneous</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>24.04</td>
<td>22.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AGENT</td>
<td>22.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NOPTRIGGER</td>
<td>22.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>STPROC</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Miscellaneous

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>22.36</td>
</tr>
<tr>
<td>AGENT</td>
<td>0.00</td>
</tr>
<tr>
<td>NOPTRIGGER</td>
<td>0.00</td>
</tr>
<tr>
<td>STPROC</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### BCPOL HIT RATIO (%)

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>GETPAGES</td>
<td>10.0</td>
</tr>
<tr>
<td>BUFFER UPDATES</td>
<td>0.00</td>
</tr>
<tr>
<td>SGENCYENTAL-NO BUFFER</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHRONOUS WRITE</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHRONOUS READ</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### BACCTDR: ACCTG SUMMARY, LONG

<table>
<thead>
<tr>
<th>Component</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>24.04</td>
<td>22.36</td>
</tr>
<tr>
<td>AGENT</td>
<td>22.36</td>
<td>0.00</td>
</tr>
<tr>
<td>NOPTRIGGER</td>
<td>22.36</td>
<td>0.00</td>
</tr>
<tr>
<td>STPROC</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Average Su

<table>
<thead>
<tr>
<th>Class 1</th>
<th>Class 2</th>
<th>Optimization</th>
<th>Average</th>
<th>Total</th>
<th>Miscellaneous</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>24.04</td>
<td>22.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AGENT</td>
<td>22.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NOPTRIGGER</td>
<td>22.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>STPROC</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Miscellaneous

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>22.36</td>
</tr>
<tr>
<td>AGENT</td>
<td>0.00</td>
</tr>
<tr>
<td>NOPTRIGGER</td>
<td>0.00</td>
</tr>
<tr>
<td>STPROC</td>
<td>0.00</td>
</tr>
<tr>
<td>UDF</td>
<td>0.00</td>
</tr>
<tr>
<td>PAR.TASKS</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### BCPOL HIT RATIO (%)

<table>
<thead>
<tr>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>GETPAGES</td>
<td>10.0</td>
</tr>
<tr>
<td>BUFFER UPDATES</td>
<td>0.00</td>
</tr>
<tr>
<td>SGENCYENTAL-NO BUFFER</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHRONOUS WRITE</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNCHRONOUS READ</td>
<td>0.00</td>
</tr>
</tbody>
</table>

---

486 MainView for DB2 Performance Reporter User Guide
Accounting summary—short report (BACCTSR)

The following figure shows a sample of the Accounting summary—short report (BACCTSR).

Figure 133: Accounting summary—short report (BACCTSR)

Accounting summary load—short report (BACCTSRD)

The following figure shows a sample of the Accounting summary load—short report (BACCTSRD).

Figure 134: Accounting summary load—short report (BACCTSRD)
Accounting summary interval—short report (BACCTSRI)

The following figure shows a sample of the Accounting summary interval—short report (BACCTSRI).

Figure 135: Accounting summary interval—short report (BACCTSRI)
### Accounting summary package—short report (BACCTSRP)

The following figure shows a sample of the Accounting summary package—short report (BACCTSRP).

#### Figure 136: Accounting summary—short report (BACCTSR)

<table>
<thead>
<tr>
<th>Interval</th>
<th># OCCUR</th>
<th>ROLLBK</th>
<th>SELECT</th>
<th>INSERT</th>
<th>UPDATE</th>
<th>DELETE</th>
<th>ELAPSED(CL1)</th>
<th>ELAPSED(CL2)</th>
<th>GETPAGE</th>
<th>BUF</th>
<th>UPDAT</th>
<th>SUSPENDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/19/15 22:15:09</td>
<td>4901</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Accounting summary exceptions—short report (BACCTSRX)

The following figure shows a sample of the Accounting summary exceptions—short report (BACCTSRX).

---

**Accounting reports**

---

Appendix D Sample Data Collector reports 489
Accounting detail trace—long report (BACCTLT)

The following figure shows a sample of the Accounting detail trace—long report (BACCTLT).

The individual sections, and field descriptions of this report are listed under “Accounting report fields” on page 175.

Figure 138: Accounting detail trace—long report (BACCTLT)
### Accounting Details: Trace - Long

**Location:** DEFG  
**Group:** N/A  
**Member:** N/A  
**Subsystem:** DEFG 10.1  
**Actual From:** 11/19/13 07:28:39.83  
**Date:** 02/23/15 08:22:09  
**Page:** 4

---

**Buffer Pool Activity**

- **BP0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 62  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 3  
  - **Pages Read Asynchronously:** 0

- **BP8K0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 2  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 0  
  - **Pages Read Asynchronously:** 0

- **BP16K0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 1  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 0  
  - **Pages Read Asynchronously:** 0

---

**Global Contention**

- **TPM:** 0  
- **TPI:** 0  
- **TPS:** 0  
- **TPI:** 0  
- **TSC:** 0  
- **TMS:** 0

---

**Resource Limit Facility**

- **Type:** N/A  
- **Table ID:** N/A  
- **Server Units:** N/A  
- **CPU Seconds:** N/A  
- **Max CPU Seconds:** N/A

---

**Accounting Trace - Long**

**Location:** DEFG  
**Group:** N/A  
**Member:** N/A  
**Subsystem:** DEFG 10.1  
**Actual From:** 11/19/13 07:28:39.83  
**Date:** 02/23/15 08:22:09  
**Page:** 5

---

**Buffer Pool Activity**

- **BP0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 62  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 3  
  - **Pages Read Asynchronously:** 0

- **BP8K0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 2  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 0  
  - **Pages Read Asynchronously:** 0

- **BP16K0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 1  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 0  
  - **Pages Read Asynchronously:** 0

---

**Global Contention**

- **TPM:** 0  
- **TPI:** 0  
- **TPS:** 0  
- **TPI:** 0  
- **TSC:** 0  
- **TMS:** 0

---

**Accounting Trace - Long**

**Location:** DEFG  
**Group:** N/A  
**Member:** N/A  
**Subsystem:** DEFG 10.1  
**Actual From:** 11/19/13 07:28:39.83  
**Date:** 02/23/15 08:22:09  
**Page:** 6

---

**Buffer Pool Activity**

- **BP0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 62  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 3  
  - **Pages Read Asynchronously:** 0

- **BP8K0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 2  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 0  
  - **Pages Read Asynchronously:** 0

- **BP16K0**
  - **Pool Hit Ratio (%):** 100  
  - **GetPage Requests:** 1  
  - **GetPages - Failed:** 0  
  - **Buffer Updates:** 0  
  - **Sequential Prefetch:** 0  
  - **List Prefetch Request:** 0  
  - **Synchronous Read 1/O:** 0  
  - **Dynamic Prefetch:** 0  
  - **Pages Read Asynchronously:** 0

---

**Global Contention**

- **TPM:** 0  
- **TPI:** 0  
- **TPS:** 0  
- **TPI:** 0  
- **TSC:** 0  
- **TMS:** 0

---

**Accounting Trace - Long**

**Location:** DEFG  
**Group:** N/A  
**Member:** N/A  
**Subsystem:** DEFG 10.1  
**Actual From:** 11/19/13 07:28:39.83  
**Date:** 02/23/15 08:22:09  
**Page:** 7
Accounting reports
### Accounting detail trace—short report (BACCTST)

The following figure shows a sample of the Accounting detail trace—short report (BACCTST).

**Figure 139: Accounting detail trace—short report (BACCTST)**

<table>
<thead>
<tr>
<th>Location: DEFF</th>
<th>Accounting detail trace—short</th>
<th>Group: N/A</th>
<th>Member: N/A</th>
<th>Actual from: 11/16/10 13:35:01.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBSYSTEM: DEFF 10.1</td>
<td>ACCOUNTING DETAIL TRACE - SHORT</td>
<td>ACCOUNTING DETAIL TRACE - SHORT</td>
<td>ACCOUNTING DETAIL TRACE - SHORT</td>
<td>ACCOUNTING DETAIL TRACE - SHORT</td>
</tr>
<tr>
<td>IDENTIFIERS</td>
<td>COUNTS:</td>
<td>AVERAGE</td>
<td>TOTAL</td>
<td>TIMES:</td>
</tr>
<tr>
<td>PRODUCT ID: A0T2013</td>
<td>OCCURRENCES:</td>
<td>1</td>
<td>ELAPSED TIME</td>
<td>1</td>
</tr>
<tr>
<td>SERVER NAME: IDAAVIPA</td>
<td>CONNECTS:</td>
<td>1</td>
<td>SVS TCP/IP</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>REQUESTS:</td>
<td>2</td>
<td>ACCUM ACCEL</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>TIMED OUT:</td>
<td>0</td>
<td>CPU TIME</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>FAILED:</td>
<td>0</td>
<td>SVS TCP/IP</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>SENT:</td>
<td>0</td>
<td>ACCUM ACCEL</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>RECEIVED:</td>
<td>0</td>
<td>DB2 THREAD</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>BYTES:</td>
<td>22001132.00</td>
<td>22001132</td>
<td>ELAPSED</td>
</tr>
<tr>
<td></td>
<td>BLOCKS:</td>
<td>17.00</td>
<td>17</td>
<td>CP CPU</td>
</tr>
<tr>
<td></td>
<td>ROWS:</td>
<td>6.00</td>
<td>6</td>
<td>SE CPU</td>
</tr>
<tr>
<td></td>
<td>RECEIVED:</td>
<td>1000003.00</td>
<td>1000003</td>
<td>CLASS 2</td>
</tr>
</tbody>
</table>

MainView for DB2 Performance Reporter User Guide
Accounting thread detail—long report (BTHACDTL)

The following figure shows a sample of the Accounting thread detail—long report (BTHACDTL).

Figure 140: Accounting thread detail—long report (BTHACDTL)
### Accounting reports

<table>
<thead>
<tr>
<th>Event</th>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log to wait</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>Latch wait</td>
<td>0</td>
<td>00:00:00</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Total: 00:00:00.028766 23.1%</td>
</tr>
<tr>
<td>DB2 Int/Exit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>STP Int/Exit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DML ACTIVITY</td>
<td>TOTAL</td>
<td>DML ACTIVITY TOTAL</td>
</tr>
<tr>
<td>SELECT</td>
<td>16</td>
<td>OPEN 85</td>
</tr>
<tr>
<td>INSERT</td>
<td>0</td>
<td>CLOSE 85</td>
</tr>
<tr>
<td>UPDATE</td>
<td>0</td>
<td>PREPARE</td>
</tr>
<tr>
<td>DELETE</td>
<td>0</td>
<td>DESCRIBE TABLE</td>
</tr>
<tr>
<td>FETCH</td>
<td>405</td>
<td>DESCRIBE TABLE</td>
</tr>
<tr>
<td>PREPARES WITH INDEX RESTRI</td>
<td>0</td>
<td>PREPARES WITH INDEX RESTRI</td>
</tr>
<tr>
<td>OTHER ACTIVITY</td>
<td>TOTAL</td>
<td>RID POOL ACTIVITY TOTAL</td>
</tr>
<tr>
<td>COMMIT</td>
<td>90</td>
<td>Successful 0</td>
</tr>
<tr>
<td>ROLLBACK</td>
<td>0</td>
<td>Not used - no storage 0</td>
</tr>
<tr>
<td>Incremental bind</td>
<td>2</td>
<td>Not used - max limit 0</td>
</tr>
<tr>
<td>STORED PROCEDURE ACTIVITY</td>
<td>TOTAL</td>
<td>STORED PROCEDURE ACTIVITY TOTAL</td>
</tr>
<tr>
<td>CALLS executed</td>
<td>0</td>
<td>Procedures abended 0</td>
</tr>
<tr>
<td>CALLS rejected</td>
<td>0</td>
<td>Procedures timed out 0</td>
</tr>
<tr>
<td>LOCKING ACTIVITY</td>
<td>TOTAL</td>
<td>LOCKING ACTIVITY TOTAL</td>
</tr>
<tr>
<td>Timeout</td>
<td>0</td>
<td>Lock request 320</td>
</tr>
<tr>
<td>Deadlock</td>
<td>0</td>
<td>Unlock request 110</td>
</tr>
<tr>
<td>Suspension (total)</td>
<td>0</td>
<td>Query request 10</td>
</tr>
<tr>
<td>Suspension (lock only)</td>
<td>0</td>
<td>Change request 10</td>
</tr>
<tr>
<td>Suspension (latch only)</td>
<td>0</td>
<td>Other request 0</td>
</tr>
<tr>
<td>Suspension (other)</td>
<td>0</td>
<td>Claim request 242</td>
</tr>
<tr>
<td>Max page or row locks</td>
<td>1</td>
<td>Claim request - failed 0</td>
</tr>
<tr>
<td>Lock escalation (shared)</td>
<td>0</td>
<td>Drain request 0</td>
</tr>
<tr>
<td>Lock escalation (exclusive)</td>
<td>0</td>
<td>Drain request - failed 0</td>
</tr>
<tr>
<td>DATA SHARING LOCKING ACTIVITY</td>
<td>TOTAL</td>
<td>DATA SHARING LOCKING ACTIVITY TOTAL</td>
</tr>
<tr>
<td>Lock request</td>
<td>0</td>
<td>N/P Suspension - IRLM 0</td>
</tr>
<tr>
<td>Change request</td>
<td>0</td>
<td>N/P Suspension - XES 0</td>
</tr>
<tr>
<td>Unlock request</td>
<td>0</td>
<td>N/P Suspension - false 0</td>
</tr>
<tr>
<td>Lock request - XES</td>
<td>0</td>
<td>N/P Incompatible request 0</td>
</tr>
<tr>
<td>Change request - XES</td>
<td>0</td>
<td>N/P Notify sent 0</td>
</tr>
<tr>
<td>Unlock request - XES</td>
<td>0</td>
<td>N/P</td>
</tr>
<tr>
<td>PARALLEL ACTIVITY</td>
<td>TOTAL</td>
<td>PARALLEL ACTIVITY TOTAL</td>
</tr>
<tr>
<td>Maximum degree</td>
<td>0</td>
<td>Fallback - cursor 0</td>
</tr>
<tr>
<td>Planned degree</td>
<td>0</td>
<td>Fallback - no buffer 0</td>
</tr>
<tr>
<td>Reduced degree</td>
<td>0</td>
<td>Fallback - no enclave 0</td>
</tr>
<tr>
<td>DDL ACTIVITY</td>
<td>CREATE</td>
<td>DDL ACTIVITY CREATIVE</td>
</tr>
<tr>
<td>TABLE</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>INDEX</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>TABLESPACE</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>STOGROUP</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>DATABASE</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>SYNONYM</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>VIEW</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>ALIAS</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>PACKAGE</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SEQUENCES</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>TRUSTED CONTEXT</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>ROLE</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>PERMIT/MASK</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>JAR</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### ZIIP RELATED TIMES

Accumulated CPU time consumed on an IBM ZIIP on all environments: 0.000000
Thread accounting package summary report (BACCPKSR)

The following figure shows a sample of the Thread accounting package summary report (BACCPKSR).

Figure 141: Thread accounting package summary report (BACCPKSR)
A sample of the BACCPKSR--Thread Accounting Package Summary report (Expanded) is shown in Figure 142 on page 498.

Figure 142: BACCPKSR--Thread Accounting Package Summary report (Expanded)
Thread summary by interval report (BTHDASUM)

The following figure shows a sample of the Thread summary by interval report (BTHDASUM).

**Figure 143: Thread summary by interval report (BTHDASUM)**

```
<table>
<thead>
<tr>
<th>Intv Begin Time</th>
<th>Commit Total</th>
<th>Abort Total</th>
<th>Elapsed</th>
<th>CPU Time</th>
<th>DB2 CPU</th>
<th>Wait Time</th>
<th>Getpage Time</th>
<th>Sync Rd</th>
<th>Requests</th>
<th>I/O Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:39:36</td>
<td>0:00:01:51</td>
<td>0:00:00.03</td>
<td>0:00:00.82</td>
<td>0:00:00.02</td>
<td>0:00:13</td>
<td>0:00:00.00</td>
<td>111</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:44:36</td>
<td>0:00:00.50</td>
<td>0:00:00.01</td>
<td>0:00:00.41</td>
<td>0:00:00.01</td>
<td>0:00:03</td>
<td>0:00:00.00</td>
<td>40</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:49:36</td>
<td>0:00:22:49</td>
<td>0:00:00.10</td>
<td>0:00:17:78</td>
<td>0:00:00.09</td>
<td>0:00:46</td>
<td>0:00:00.02</td>
<td>702</td>
<td>70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Thread detail by AUTHID report (BTHDADTL)

The following figure shows a sample of the Thread detail by AUTHID report (BTHDADTL).

**Figure 144: Thread detail by AUTHID report (BTHDADTL)**

```
<table>
<thead>
<tr>
<th>Authid</th>
<th>EventTime</th>
<th>Commit Total</th>
<th>Abort Total</th>
<th>Elapsed</th>
<th>CPU Time</th>
<th>DB2 CPU</th>
<th>Wait Time</th>
<th>Getpage Time</th>
<th>Sync Rd</th>
<th>Requests</th>
<th>I/O Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOLJXO</td>
<td>09:42:48</td>
<td>0:00:00.45</td>
<td>0:00:00.01</td>
<td>0:00:00.25</td>
<td>0:00:00.01</td>
<td>0:059896</td>
<td>0:00:00.00</td>
<td>23</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:42:57</td>
<td>0:00:00.30</td>
<td>0:00:00.01</td>
<td>0:00:00.04</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>11</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:43:28</td>
<td>0:00:00.76</td>
<td>0:00:00.01</td>
<td>0:00:00.53</td>
<td>0:00:00.01</td>
<td>0:073942</td>
<td>0:00:00.00</td>
<td>4</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:49:46</td>
<td>0:00:04.26</td>
<td>0:00:00.03</td>
<td>0:00:04.19</td>
<td>0:00:00.03</td>
<td>0:289837</td>
<td>0:00:00.00</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:51:50</td>
<td>0:00:00.39</td>
<td>0:00:00.02</td>
<td>0:00:00.32</td>
<td>0:00:00.00</td>
<td>0:170012</td>
<td>0:00:00.00</td>
<td>6</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:00</td>
<td>0:00:00.01</td>
<td>0:00:00.00</td>
<td>0:00:00.04</td>
<td>0:00:00.00</td>
<td>0:328656</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:34</td>
<td>0:00:00.12</td>
<td>0:00:00.00</td>
<td>0:00:00.04</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:20</td>
<td>0:00:00.11</td>
<td>0:00:00.00</td>
<td>0:00:00.02</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:24</td>
<td>0:00:00.24</td>
<td>0:00:00.00</td>
<td>0:00:00.03</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:28</td>
<td>0:00:00.09</td>
<td>0:00:00.00</td>
<td>0:00:00.01</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:32</td>
<td>0:00:00.10</td>
<td>0:00:00.00</td>
<td>0:00:00.03</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:34</td>
<td>0:00:00.10</td>
<td>0:00:00.00</td>
<td>0:00:00.02</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:37</td>
<td>0:00:00.09</td>
<td>0:00:00.00</td>
<td>0:00:00.02</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOLJXO</td>
<td>09:52:52</td>
<td>0:00:13:09</td>
<td>0:00:00.01</td>
<td>0:00:00.04</td>
<td>0:00:00.00</td>
<td>0:000000</td>
<td>0:00:00.00</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Dynamic SQL Miniplan by period report (THSQLDYN)

The following figure shows a sample of the Dynamic SQL Miniplan by period report (THSQLDYN).

**Figure 145: Dynamic SQL Miniplan by period report (THSQLDYN)**

```
<table>
<thead>
<tr>
<th>Period Begin</th>
<th>Dyn SQL</th>
<th>Mini-plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/21/05 06:57:36</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>
```
Dynamic SQL Miniplan summary report (THSQLDYS)

The following figure shows a sample of the Dynamic SQL Miniplan summary report (THSQLDYS).

Figure 146: Dynamic SQL Miniplan summary report (THSQLDYS)

<table>
<thead>
<tr>
<th>Event Time</th>
<th>Type</th>
<th>Auth</th>
<th>Plan</th>
<th>Conn</th>
<th>Corr</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>DYN SQL</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
<tr>
<td>+ 07/21/05 07:55:31.532231</td>
<td>MINIPLAN</td>
<td>DMRQA02</td>
<td>DISTSERV SERVER</td>
<td>REXX.EXE</td>
<td></td>
</tr>
</tbody>
</table>

Statistics reports

The reports in this section are sample Data Collector statistics reports.

The following reports are included:

Table 170: Data Collector statistics reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSTATDI</td>
<td>DB2 statistics IFCID tracing detail</td>
<td>“DB2 statistics IFCID tracing detail report (BSTATDI)” on page 501</td>
</tr>
<tr>
<td>BSTATDR</td>
<td>DB2 statistics detail</td>
<td>“DB2 statistics detail report (BSTATDR)” on page 501</td>
</tr>
<tr>
<td>BSTATLT</td>
<td>DB2 statistics trace long</td>
<td>“DB2 statistics trace—long report (BSTATLT)” on page 512</td>
</tr>
<tr>
<td>BSTATSTD</td>
<td>Virtual storage status</td>
<td>“Virtual storage status report (BSTATSTD)” on page 522</td>
</tr>
<tr>
<td>BSTATSTL</td>
<td>Virtual storage status</td>
<td>“Virtual storage status report (BSTATSTL)” on page 523</td>
</tr>
<tr>
<td>BSTATSTM</td>
<td>Virtual storage status</td>
<td>“Virtual storage status report (BSTATSTM)” on page 524</td>
</tr>
</tbody>
</table>
DB2 statistics IFCID tracing detail report (BSTATDI)

The following figure shows a sample of the DB2 statistics IFCID tracing detail report (BSTATDI).

```
Figure 147: DB2 statistics IFCID tracing detail report (BSTATDI)

BSTATDI : DB2 STATISTICS IFCID DETAILS                           12/02/04 09:59:00 PAGE     1
GROUP :                                      DB2 STATISTICS IFCID TRACING DETAIL                 DB2 SUBSYSTEM: DECN 8.1
MEMBER:                                                                                               LOCATION: DECN
BEGIN RECORD:  09/17/04  09:56:36.50
ELAPSED TIME:    73  DAYS  73 03:43:19                        Statistics invocation reason:  BY COMMAND
IFCID     WRITTEN    NOT WRITTEN   NOT WANTED    BUFFER NAV    COLLECT FAIL
-----      --------    -----------   ----------    ----------    ------------
1       7331          3564             0             0              0
2       7331          3564             0             0              0
3       1282         4981             0             0              0
4       683           257             0             0              0
5       434           380             0             0              0
106     2789         3706             0             0              0
140     0            468             0             0              0
141     0           115             0             0              0
142     0            0             0             0              0
143     0            3628           0             0              0
144     0            3782           0             0              0
145     0            0             0             0              0
146     0            0             0             0              0
199     0            36             0             0              0
202     5959         3399           0             0              0
230     0            0             0             0              0
TOTAL      27990  64844168         0     94598         0
```

DB2 statistics detail report (BSTATDR)

The following figure shows a sample of the DB2 statistics detail report (BSTATDR).
The individual sections, and field descriptions of this report are listed under “Statistics report fields” on page 227.

The BSTATDR report is designed to report on the delta values between the start and end times of the requested interval. If DB2 is recycled during the interval, the statistics values are reset and the delta calculations are impacted, which can result in low or even negative values in the report. To avoid such values, break the interval into two separate reports that do not span the time that DB2 was down.

### Figure 148: DB2 statistics detail report (BSTATDR)

<table>
<thead>
<tr>
<th>SQL DML</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
<th>SQL DML</th>
<th>QUANTITY</th>
<th>/MINUTE</th>
<th>/THREAD</th>
<th>/COMMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>LOCK TABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>INSERT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>GRANT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>UPDATE</td>
<td>24</td>
<td>1.00</td>
<td>0.09</td>
<td>0.08</td>
<td>REVOKE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DELETE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>SET CURRENT SOLID</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PREPARE</td>
<td>5193</td>
<td>216.39</td>
<td>19.60</td>
<td>18.03</td>
<td>SET CURRENT DEGREE</td>
<td>2596</td>
<td>108.17</td>
<td>9.80</td>
<td>9.01</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>5193</td>
<td>216.39</td>
<td>19.60</td>
<td>18.03</td>
<td>SET CURRENT DEGREE</td>
<td>2596</td>
<td>108.17</td>
<td>9.80</td>
<td>9.01</td>
</tr>
<tr>
<td>DESCRIPTABLE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>CONNECT TYPE 1</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>OPEN CURSOR</td>
<td>2621</td>
<td>109.22</td>
<td>9.89</td>
<td>9.10</td>
<td>CONNECT TYPE 2</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CLOSE CURSOR</td>
<td>2620</td>
<td>109.17</td>
<td>9.89</td>
<td>9.10</td>
<td>RELEASE</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>FETCH</td>
<td>5218</td>
<td>217.43</td>
<td>19.69</td>
<td>18.12</td>
<td>SET CONNECTION</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20869</td>
<td>869.60</td>
<td>78.75</td>
<td>72.46</td>
<td>SET CURRENT PATH</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROWS DELETED</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>ALLOCATE LOCATORS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROWS INSERTED</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>FREE LOCATOR</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ROWS UPDATED</td>
<td>N/P</td>
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<td>0.00</td>
<td>0.00</td>
<td>HOLD LOCATOR</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### STATISTICS REPORTS

Statistics reports

MainView for DB2 Performance Reporter User Guide

502  MainView for DB2 Performance Reporter User Guide
Appendix D  Sample Data Collector reports

Statistics reports
<table>
<thead>
<tr>
<th>Statistic Description</th>
<th>Quantity</th>
<th>/Minute</th>
<th>/Thread</th>
<th>/Commit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN ALLOC ATTEMPTS</td>
<td>265</td>
<td>11.04</td>
<td>1.00</td>
<td>0.92</td>
</tr>
<tr>
<td>PLAN ALLOC SUCCESSFUL</td>
<td>285</td>
<td>11.88</td>
<td>1.08</td>
<td>0.99</td>
</tr>
<tr>
<td>PLAN ALLOC ATTEMPTS</td>
<td>285</td>
<td>11.88</td>
<td>1.08</td>
<td>0.99</td>
</tr>
<tr>
<td>PLAN ALLOC SUCCESSFUL</td>
<td>285</td>
<td>11.88</td>
<td>1.08</td>
<td>0.99</td>
</tr>
<tr>
<td>PLAN BOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND ADD SUBMODS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND REPLACE SUBMODS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TEST BINDS NO PLAN-IO</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PACKAGES BOUND</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND ADD PKG SUBMODS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>BIND REPLACE PKG SUBMODS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTOMATIC BIND ATTEMPTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTOMATIC BIND SUCCESS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTO BIND INVALID RES ID</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTO BIND PACKAGE ATTEMPTS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>AUTO BIND PACKAGE SUCCESS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>REBIND SUBCOMMANDS</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ATTEMPT TO REBIND A PLAN</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
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**Statistics reports**

**Appendix D Sample Data Collector reports 505**
Statistics reports

MainView for DB2 Performance Reporter User Guide
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### DB Statistics Report

*Statistics reports*

---

### Statistics Report Details

**GROUP:** DB2 STATISTICS DETAIL

**MEMBER:** DB2 SUBSYSTEM: DEFG 10.1

**BEGIN RECORD:** (15.054) 02/23/15 07:50:00.14

**END RECORD:** (15.054) 02/23/15 08:14:00.05

**ELAPSED TIME:** 0 DAYS 00:24:00

**TOTAL THREADS:** 265

**DBBATS:** 0

**COMMITS:** 288

**INCREMENTAL BIND:** 48

---

**GROUP:** DB2 STATISTICS DETAIL

**MEMBER:** DB2 SUBSYSTEM: DEFG 10.1

**BEGIN RECORD:** (15.054) 02/23/15 07:50:00.14

**END RECORD:** (15.054) 02/23/15 08:14:00.05

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**GROUP:** DB2 STATISTICS DETAIL

**MEMBER:** DB2 SUBSYSTEM: DEFG 10.1

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**TOTAL THREADS:** 265

**DBBATS:** 0

**COMMITS:** 288

**INCREMENTAL BIND:** 48

---

Appendix D Sample Data Collector reports 507
### DB2 STATISTICS DETAIL REPORT

**Group:**
- **DB2 SUBSYSTEM:** DEFG 10.1
- **Location:** DEF

**Begin Record:** (15.054) 02/23/15 07:50:00.14
**End Record:** (15.054) 02/23/15 08:14:00.05
**Elapsed Time:** 0 DAYS 00:24:00

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- 36331

**Pages Written/write 1/0**
- 0

**Synchronous Writes**
- 0

**Asynchronous Writes**
- 0

**Pages Written/write 1/0**
- 0

**Write engine not available**
- 0

**Sync hpool write**
- 0

**Asyn hpool write**
- 0

**Hpool write failed**
- 0

**Asyn db movr hpool write-s**
- 0

**Asyn db movr hpool write-f**
- 0

**Bpool hit ratio (%)**
- 100.00

**Hpool r/w ratio (%)**
- N/P

---

### DB2 STATISTICS DETAIL REPORT

**Group:**
- **DB2 SUBSYSTEM:** DEFG 10.1
- **Location:** DEF

**Begin Record:** (15.054) 02/23/15 07:50:00.14
**End Record:** (15.054) 02/23/15 08:14:00.05
**Elapsed Time:** 0 DAYS 00:24:00

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**Buffer Updates**
- 0

**Pages Written/write 1/0**
- 0

**Write engine not available**
- 0

**Sync hpool write**
- 0

**Asyn hpool write**
- 0

**Hpool write failed**
- 0

**Asyn db movr hpool write-s**
- 0

**Asyn db movr hpool write-f**
- 0

**Bpool hit ratio (%)**
- 0.00

**Hpool r/w ratio (%)**
- N/P

---

**Average active buffers**
- 6

**Unavail buf-vpool full**
- 0

**Number of dataset opens**
- 0

**Buffers allocated-vpool**
- 128

**Buffers allocated-hpool**
- 0

**Hpool buffers backed**
- 0

**Dhsm migrated datasets**
- 0

**Dhsm recall timeouts**
- 0

**Hpool expand/contract**
- 0

**Vpool expand/contract**
- 0

**Vpool/hpool exp failure**
- 0

---

**508**

**MainView for DB2 Performance Reporter User Guide**
Appendix D  Sample Data Collector reports 509

Statistics reports
<table>
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<tr>
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### BP16K WRITE OPERATIONS

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*MainView for DB2 Performance Reporter User Guide*
### Page 59

#### MEMBER: LOCATION: DEFG

**ELAPSED TIME:** 0 DAYS 00:24:00  
**TOTAL THREADS:** 265  
**#DBATS:** 0  
**COMMITS:** 288  
**INCREMENTAL BIND:** 48

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#### Page 60

#### MEMBER: LOCATION: DEFG

**ELAPSED TIME:** 0 DAYS 00:24:00  
**TOTAL THREADS:** 265  
**#DBATS:** 0  
**COMMITS:** 288  
**INCREMENTAL BIND:** 48

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<td>169.07</td>
<td>156.57</td>
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</tr>
</tbody>
</table>

### Appendix D: Sample Data Collector reports

Statistics reports
### DB2 statistics trace—long report (BSTATLT)

The following figure shows a sample of the DB2 statistics trace—long report (BSTATLT).

The individual sections and field descriptions of this report are listed under “Statistics report fields” on page 227.

**Figure 149: DB2 statistics trace—long report (BSTATLT)**

| LAST AGENT REQUESTS SENT | N/P | LAST AGENT REQUESTS RECEIVED | N/P | TWO PHASE COMMIT REQUESTS SENT | N/P | TWO PHASE COMMIT REQUESTS RECEIVED | N/P | BACKUP REQUESTS SENT | N/P | BACKUP REQUESTS RECEIVED | N/P | FORGET REQUESTS SENT | N/P | FORGET REQUESTS RECEIVED | N/P | REQUEST COMMIT RESPONSES SENT | N/P | REQUEST COMMIT RESPONSES RECEIVED | N/P | BACKUP RESPONSES SENT | N/P | BACKUP RESPONSES RECEIVED | N/P | THREADS INDOUBT WITH REMOTE AS COORDINATOR | 0 | BACKOUT DURING REMOTE AS COORDINATOR | N/P |
|--------------------------|-----|-----------------------------|-----|-------------------------------|-----|-------------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| ELAPSED TIME: 0 days 00:24:00 | TOTAL THREADS: 265 | #DBATS: 0 | COMMITS: 288 | INCREMENTAL BIND: 48 |}

**Statistics reports**

MainView for DB2 Performance Reporter User Guide
## Appendix D  Sample Data Collector reports

### Statistics reports

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**MainView for DB2 Performance Reporter User Guide**

---

**Statistics reports**

**GROUP:**
- **DB2 STATISTICS**
- **TRACELONG**
- **DB2 SUBSYSTEM:**
- **DEFG 10.1**

**BEGIN RECORD:** (15.054) 02/23/15 07:54:00.11

**END RECORD:** (15.054) 02/23/15 07:55:00.41

---

**ELAPSED TIME:** 00:01:00.30

**THREADS:** 12

**#DBATS:** 0

**COMMITS:** 12

**INCREMENTAL BIND:** 2

---

**II. Statistical Reports**

**1. BSTATLT: STATISTICS LONG TRACE**

**Page 555**

**Member:**
- **GROUP:**
- **LOCATION:**

**Begin Record:** (15.054) 02/23/15 07:54:00.11

**End Record:** (15.054) 02/23/15 07:55:00.41

**Elapsed Time:** 00:01:00.30

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**#DBATS:** 0

**Commits:** 12

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**II. Statistical Reports**

**1. BSTATLT: STATISTICS LONG TRACE**

**Page 556**

**Member:**
- **GROUP:**
- **LOCATION:**

**Begin Record:** (15.054) 02/23/15 07:54:00.11

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**Elapsed Time:** 00:01:00.30

**Threads:** 12

**#DBATS:** 0

**Commits:** 12

**Incremental Bind:** 2

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**MainView for DB2 Performance Reporter User Guide**

---

**Statistics reports**

**GROUP:**
- **DB2 STATISTICS**
- **TRACELONG**
- **DB2 SUBSYSTEM:**
- **DEFG 10.1**

**BEGIN RECORD:** (15.054) 02/23/15 07:54:00.11

**END RECORD:** (15.054) 02/23/15 07:55:00.41

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**ELAPSED TIME:** 00:01:00.30

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**#DBATS:** 0

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**#DBATS:** 0

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**Page 556**

**Member:**
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**MainView for DB2 Performance Reporter User Guide**

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**Statistics reports**

**GROUP:**
- **DB2 STATISTICS**
- **TRACELONG**
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**BEGIN RECORD:** (15.054) 02/23/15 07:54:00.11

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**Page 555**

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- **GROUP:**
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**II. Statistical Reports**

**1. BSTATLT: STATISTICS LONG TRACE**

**Page 556**

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**MainView for DB2 Performance Reporter User Guide**
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<td></td>
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<td></td>
<td></td>
<td>Display DDF</td>
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</table>

Appendix D  Sample Data Collector reports 515

Statistics reports
### Buffer Allocation Statistics

<table>
<thead>
<tr>
<th>Buffer Pool</th>
<th>Active Buffers</th>
<th>Unavailable Buffers</th>
<th>GETPAGE Requests</th>
<th>GETPAGE Requests-Sequential</th>
<th>GETPAGE Requests-Random</th>
<th>Synchronous Reads</th>
<th>Sequential Reads</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPOOL</td>
<td>58</td>
<td>0</td>
<td>58</td>
<td>58</td>
<td>0</td>
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<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>BPOOL</td>
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<td>5</td>
<td>5</td>
<td>0</td>
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### IFC Record Count

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<th>Not WRIT</th>
<th>LATCH CNT</th>
<th>SECOND</th>
<th>SECOND</th>
<th>SECOND</th>
<th>SECOND</th>
<th>MISCELLANEOUS</th>
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<tbody>
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<td>Total</td>
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<td>26</td>
<td>1</td>
<td>100</td>
<td>20</td>
<td>1</td>
<td>20</td>
<td>1</td>
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### Global Statistics

<table>
<thead>
<tr>
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<th>Value</th>
</tr>
</thead>
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<td>Buffers Allocated - HPOOL</td>
<td>N/P</td>
</tr>
<tr>
<td>Buffers Allocated - VPOOL</td>
<td>2000</td>
</tr>
<tr>
<td>Buffers Allocated - HPOOL</td>
<td>N/P</td>
</tr>
<tr>
<td>Buffers Allocated - VPOOL</td>
<td>100</td>
</tr>
<tr>
<td>Buffers Allocated - BPOOL</td>
<td>5</td>
</tr>
<tr>
<td>Buffers Allocated - HPOOL</td>
<td>N/P</td>
</tr>
<tr>
<td>Buffers Allocated - VPOOL</td>
<td>0</td>
</tr>
<tr>
<td>Buffers Allocated - BPOOL</td>
<td>0</td>
</tr>
<tr>
<td>Data Descriptions Returned</td>
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</tr>
<tr>
<td>Table Read Operations</td>
<td>0</td>
</tr>
<tr>
<td>Table Read Operations</td>
<td>0</td>
</tr>
<tr>
<td>Table Read Operations</td>
<td>0</td>
</tr>
<tr>
<td>Prepare Requests</td>
<td>137334</td>
</tr>
<tr>
<td>Full Prepare</td>
<td>0.99</td>
</tr>
<tr>
<td>Half Prepare</td>
<td>109.08</td>
</tr>
<tr>
<td>Global Cache Hit Ratio</td>
<td>99</td>
</tr>
<tr>
<td>Implicit Prepare</td>
<td>0</td>
</tr>
<tr>
<td>Prepare Avoid</td>
<td>0</td>
</tr>
<tr>
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</tr>
<tr>
<td>Stmt Invalid (No Non)</td>
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</tr>
<tr>
<td>Local Cache Hit Ratio(%)</td>
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</tr>
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</table>

### Dynamic SQL Statement Statistics

<table>
<thead>
<tr>
<th>Statement Type</th>
<th>Count</th>
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<th>/Thread</th>
<th>/Commit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare Requests</td>
<td>137334</td>
<td>136642</td>
<td>11444.5</td>
<td>11444.5</td>
</tr>
<tr>
<td>Implicit Prepare</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Prepare Avoid</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Stmt Invalid (Maxkeep)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Stmt Invalid (No Non)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Local Cache Hit Ratio (%)</td>
<td>N/P</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

### System Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sync HPOOL Reads</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch HPOOL Reads</td>
<td>0</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-F</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-S</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-F</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-S</td>
<td>N/P</td>
</tr>
<tr>
<td>BPOOL Hit Ratio (%)</td>
<td>99.48</td>
</tr>
<tr>
<td>HPOOL Hit Ratio (%)</td>
<td>0.00</td>
</tr>
<tr>
<td>BPOOL Hit Ratio (%)</td>
<td>0.00</td>
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<tr>
<td>HPOOL Hit Ratio (%)</td>
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<tr>
<td>HPOOL Hit Ratio (%)</td>
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</table>

### SMF Record Count

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>/Minute</th>
<th>/Thread</th>
<th>/Commit</th>
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<tbody>
<tr>
<td>Prepare Requests</td>
<td>137334</td>
<td>136642</td>
<td>11444.5</td>
<td>11444.5</td>
</tr>
<tr>
<td>Implicit Prepare</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Prepare Avoid</td>
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<tr>
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<td>Local Cache Hit Ratio (%)</td>
<td>N/P</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### System Parameters

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Sync HPOOL Reads</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch HPOOL Reads</td>
<td>0</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-F</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-S</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-F</td>
<td>N/P</td>
</tr>
<tr>
<td>Asynch DA MovR HPOOL Read-S</td>
<td>N/P</td>
</tr>
<tr>
<td>BPOOL Hit Ratio (%)</td>
<td>99.48</td>
</tr>
<tr>
<td>HPOOL Hit Ratio (%)</td>
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</tr>
<tr>
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<tr>
<td>HPOOL Hit Ratio (%)</td>
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</tr>
</tbody>
</table>

---

**Appendix D** Sample Data Collector reports 517

**Statistics reports**
### Statistics reports

**MainView for DB2 Performance Reporter User Guide**

**MEMBER:** LOCATON: DEFG

**BEGIN RECORD:** (15.054) 02/23/15 07:54:00.11  **END RECORD:** (15.054) 02/23/15 07:55:00.41

**ELAPSED TIME:** 00:01:00.30  **THREADS:** 12  **#DBATS:** 0  **COMITS:** 12  **INCREMENTAL BIND:** 2

### Buffer Pool BP1

<table>
<thead>
<tr>
<th>Buffer Operation</th>
<th>Quantity</th>
<th>/Minute</th>
<th>/Thread</th>
<th>/Commit</th>
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</thead>
<tbody>
<tr>
<td>Updates</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Pages Written</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Pages Written/Write I/O</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDRZ DEF WRITE THRESH</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>VERTI DEF WRITE THRESH</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DM CRITICAL THRESHOLD</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>WRITE ENGINE NOT AVAILABLE</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PAGE INS REQ FOR WRITE</td>
<td>0</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SYNC HPOLL WRITE</td>
<td>N/P</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASYNC HPOLL WRITE</td>
<td>N/P</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HPOLL WRITE FAILED</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASYN DA MVR HPOLL WRIT-F</td>
<td>N/P</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NBR PAGES UNLOCK CASTOUT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NBR I/O ON CASTOUT</td>
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</table>

### Buffer Pool BP0

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<tbody>
<tr>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Pages Written/Write I/O</td>
<td>N/P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDRZ DEF WRITE THRESH</td>
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<td>0.00</td>
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<tr>
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<td>0.00</td>
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<tr>
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<td>0.00</td>
<td>0.00</td>
</tr>
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<tr>
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<td>0.00</td>
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<td>ASYNC HPOLL WRITE</td>
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</tr>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASYN DA MVR HPOLL WRIT-F</td>
<td>N/P</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>NBR PAGES UNLOCK CASTOUT</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>NBR I/O ON CASTOUT</td>
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</tr>
</tbody>
</table>

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**Statistics reports**

**MainView for DB2 Performance Reporter User Guide**

---

518 **MainView for DB2 Performance Reporter User Guide**
Statistics reports

**Appendix D  Sample Data Collector reports 519**
<table>
<thead>
<tr>
<th>NUMBER OF DATASET OPENS</th>
<th>0</th>
<th>0.00</th>
<th>0.00</th>
<th>0.00</th>
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<tbody>
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<td>BUFFERS ALLOCATED-VPOOL</td>
<td>64</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>HPool Buffers Backed</td>
<td>N/P</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
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<td>HPOOL Expand/Contract</td>
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<td>0.00</td>
<td>0.00</td>
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<tr>
<td>VPOOL Expand/Contract</td>
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<tr>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Buffer Updates</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Pages Written</td>
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<td>0.00</td>
<td>0.00</td>
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</tr>
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</tr>
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<td>ASYN HPOOL Write</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HPool Write Failed</td>
<td>N/P</td>
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</tr>
<tr>
<td>BPOOL Hit Ratio (%)</td>
<td>50.00</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>HPOOL R/W Ratio (%)</td>
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</tr>
<tr>
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</tr>
</tbody>
</table>

**MainView for DB2 Performance Reporter User Guide**
Appendix D  Sample Data Collector reports 521
### Virtual storage status report (BSTATSTD)

The following figure shows a sample of the Virtual storage status report (BSTATSTD).

The individual sections and field descriptions of this report are listed under “Statistics report fields” on page 227.

#### Figure 150: Virtual storage status report (BSTATSTD)

<table>
<thead>
<tr>
<th>DB2 SSID: DIZ2 10.</th>
<th>LOCATION: DIZ</th>
<th>DBM1 STORAGE STATISTICS (MB)</th>
<th>QUANTITY</th>
</tr>
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<tbody>
<tr>
<td>INTERVAL : 10:00:00</td>
<td>DBM1 STORAGE SUMMARY BELOW 2 GB</td>
<td>STORAGE AVAILABLE TO DBM1</td>
<td>1277.65 MB</td>
</tr>
<tr>
<td>MAXIMUM NUMBER OF THREADS POSSIBLE</td>
<td>N/P</td>
<td>AVERAGE THREAD FOOTPRINT</td>
<td>N/P</td>
</tr>
<tr>
<td>TOTAL NUMBER OF ACTIVE USER THREADS</td>
<td>N/P</td>
<td>TOTAL STORAGE FOR ALL THREADS</td>
<td>0.66 MB</td>
</tr>
<tr>
<td>TOTAL DBM1 STORAGE</td>
<td>N/P</td>
<td>TOTAL GETMAINED STORAGE</td>
<td>1.00 MB</td>
</tr>
<tr>
<td>TOTAL VARIABLE STORAGE</td>
<td>N/P</td>
<td>COMPRESSION DICTIONARY STORAGE</td>
<td>0.00 MB</td>
</tr>
<tr>
<td>TOTAL AGENT SYSTEM STORAGE</td>
<td>N/P</td>
<td>TOTAL AGENT LOCAL STORAGE</td>
<td>0.00 MB</td>
</tr>
<tr>
<td>TOTAL AGENT LOCAL STORAGE</td>
<td>N/P</td>
<td>HDRPOOL CURRENT STORAGE</td>
<td>0.00 MB</td>
</tr>
<tr>
<td>HDRPOOL CURRENT STORAGE</td>
<td>N/P</td>
<td>PIPE MANAGER STORAGE</td>
<td>0.00 MB</td>
</tr>
<tr>
<td>LOCAL DYNAMIC STMTCACHE CNTL BLKS</td>
<td>N/P</td>
<td>LOCAL DYNAMIC STMTCACHE STMTCPOOL</td>
<td>0.00 MB</td>
</tr>
<tr>
<td>LOCAL DYNAMIC STMTCACHE STMTCPOOL</td>
<td>N/P</td>
<td>BUFFER AND DATA MANAGER TRL TABLE</td>
<td>0.00 MB</td>
</tr>
<tr>
<td>TOTAL FIXED STORAGE</td>
<td>0.08 MB</td>
<td>TOTAL GETMAINED STACK STORAGE</td>
<td>0.66 MB</td>
</tr>
<tr>
<td>TOTAL STORAGE FOR MVS USAGE</td>
<td>N/P</td>
<td>STORAGE CUSHION</td>
<td>129.20 MB</td>
</tr>
<tr>
<td>AMOUNT OF STORAGE FOR MVS USAGE</td>
<td>12.39 MB</td>
<td>TOTAL MVSTORAGE BELOW 2GB</td>
<td>N/P</td>
</tr>
<tr>
<td>24 BIT LOW PRIVATE</td>
<td>0.24 MB</td>
<td>24 BIT HIGH PRIVATE</td>
<td>0.27 MB</td>
</tr>
</tbody>
</table>
Virtual storage status report (BSTATSTL)

The following figure shows a sample of the Virtual storage status report (BSTATSTL).

The individual sections and field descriptions of this report are listed under “Statistics report fields” on page 227.

Figure 151: Virtual storage status report (BSTATSTL)
Virtual storage status report (BSTATSTM)

The following figure shows a sample of the Virtual storage status report (BSTATSTM).

The individual sections and field descriptions of this report are listed under “Statistics report fields” on page 227.

Figure 152: Virtual storage status report (BSTATSTM)

```
00:26:00  1000  71440  16772  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:28:00  1000  70984  16679  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:30:00  1000  70480  16798  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:32:00  1000  71193  16589  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:34:00  1000  71393  16630  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:36:00  1000  70277  16847  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:38:00  1000  70772  16458  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:40:00  1000  73456  16118  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:42:00  1000  71370  16589  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:44:00  1000  71388  16585  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:46:00  1000  71370  16589  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:48:00  1000  71456  16118  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:50:00  1000  74038  15991  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:52:00  1000  73641  16077  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:54:00  1000  73641  16077  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:56:00  1000  73641  16077  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
00:58:00  1000  73641  16077  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
01:00:00  1000  73528  16101  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
01:02:00  1000  73379  16134  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
01:04:00  1000  72971  16224  1300  110  127  1  0  16  0  0  0  0  0  1  110  146
01:06:00  1000  67484  17543  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:08:00  1000  67485  17543  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:10:00  1000  67516  17535  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:12:00  1000  67516  17535  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:14:00  1000  67517  17535  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:16:00  1000  67517  17535  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:18:00  1000  67596  17514  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:20:00  1000  67595  17514  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:22:00  1000  67595  17514  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
01:24:00  1000  68089  17408  1299  110  128  1  0  17  0  0  0  0  0  1  110  146
```

Virtual storage status report (BSTATSTM)

The following figure shows a sample of the Virtual storage status report (BSTATSTM).

The individual sections and field descriptions of this report are listed under “Statistics report fields” on page 227.

Figure 152: Virtual storage status report (BSTATSTM)
Virtual storage status report (BSTATSTX)

The following figure shows a sample of the Virtual storage status report (BSTATSTX).

The individual sections and field descriptions of this report are listed under “Statistics report fields” on page 227.

Figure 153: Virtual storage status report (BSTATSTX)
Statistics reports

13:35:00

DB2 SSID: DEFF 10.1

13:35:00

# of 4K aux slots in use for 64 bit private(Z11) 227813
High Water Mark for number of Real4K frames,64bitPrv 170352
High Water Mark Aux slots 64BIT PRIV 227813

Storage Statistics

<table>
<thead>
<tr>
<th>Address Space name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS extended Region size</td>
<td>1407 MB</td>
</tr>
<tr>
<td>MVS 24 BIT LOW PRIVATE</td>
<td>0 MB</td>
</tr>
<tr>
<td>MVS 24 BIT HIGH PRIVATE</td>
<td>0 MB</td>
</tr>
<tr>
<td>MVS 31 bit extended low private</td>
<td>5 MB</td>
</tr>
<tr>
<td>MVS 31 BIT EXTENDED HI PVT</td>
<td>13 MB</td>
</tr>
<tr>
<td>Curr high addr 24 bit private</td>
<td>00042000</td>
</tr>
<tr>
<td>Curr high addr 31 bit private</td>
<td>2861000</td>
</tr>
<tr>
<td>31-bit storage reserved for must complete</td>
<td>141 MB</td>
</tr>
<tr>
<td>31-bit storage reserved for MVSt</td>
<td>12 MB</td>
</tr>
<tr>
<td>Strg cushion warning contract</td>
<td>141 MB</td>
</tr>
<tr>
<td>Total 31-bit getmained stack</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total 31-bit stack in use</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total 31-bit variable pool storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 31-bit fixed pool storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 31-bit getmained storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Amount of available 31-bit storage</td>
<td>1389 MB</td>
</tr>
<tr>
<td>Total 64-bit private variable pool storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 64-bit private fixed pool storage</td>
<td>0 MB</td>
</tr>
<tr>
<td>Total 64-bit private getmained storage</td>
<td>1 MB</td>
</tr>
<tr>
<td>Total 64-bit private storage for storage mgr control strc</td>
<td>1 MB</td>
</tr>
<tr>
<td>Number of Aux(4K) FRAMES in use for 31,64 bit private</td>
<td>1749</td>
</tr>
<tr>
<td># of 4K frames in use for 64 bit private(Z11)</td>
<td>10</td>
</tr>
</tbody>
</table>

13:35:00

Thread Information

| Number of active threads | 16 |
| Number of active and disconnected DBATS | 0 |
| Number of Castout Engines | 0 |
| Number of Deferred Write Engines | 300 |
| Number of GBP Write Engines | 0 |
| Number of Prefetch Engines | 341 |
| Number of P-lock/notify exit engine | 0 |

Shared and Common Storage summary

| MVS Extended CSA size | 500 MB |
| Total 31-bit common fixed pool Storage | 3 MB |
| Total 31-bit variable pool Storage | 1 MB |
| Total 31-bit common getmained storage | 0 MB |
| Total 64-bit common fixed pool Storage | 4 MB |
| Total 64-bit variable pool Storage | 12 MB |
| Total 64-bit common getmained storage | 0 MB |
| Total 64-bit common storage for stor mgr control strc | 1 MB |
| Total 64-bit shared variable pool storage | 309 MB |
| Total 64-bit shared fixed pool storage | 4 MB |
| Total 64-bit shared getmained storage | 4 MB |
| Total 64-bit shared storage for stor mgr control strc | 13 MB |
| Total 64-bit shared system agent stack | 256 MB |
| Total 64-bit shared system agent stack in use | 185 MB |
| Total 64-bit shared non-system agent stack | 768 MB |
| Total 64-bit shared non-system agent stack in use | 8 MB |
| Number of Shared Memory objects on this LPAR | 28 |
| Number of Shared Memory pages on this LPAR | 70464 |
| High Water Mark of 64bit shared bytes on LPAR | 31610 |
| Number if 64bit shared pages backed in real strg | 85218 |
| Number of aux slots used for 64bit shared strg LPAR | 127119 |
| Number of 64bit Shared pages paged in aux strg | 119531 |
| Number of 64bit Shared pages paged out aux strg | 178783 |

Statement Cache and XPROC Detail

| Total 31-bit XPROC for Dyn SQl active threads | 0 MB |
| Alloc 31-bit XProc strg for Dyn SQl active thds | 0 MB |
| Total 31-bit XPROC strg for static SQl stnts | 1 MB |
| HWM # of Stmt in 64bit agrt local pools | 0 |
| Number of statements 64bit agrt local pools | 0 |
| HWM of Stmt in 64bit agrt local pool at high Strg | 0 |
| Allocated statement cache strg in 64 bit agrt local | 0 MB |
| HWM Allloc stmt cache strg 64 bit local pools | 0 MB |
| Time Stamp of HWM for Stor alloc in 64 bit Pools | 13:35:10 |
| Total 64 bit STMT Cache blks 2G Storage | 216 MB |

Pool Details

| Total agent local storage(31-bit DBM1 prv var) | 9 MB |
| Total system local storage(31-bit DBM1 prv var) | 8 MB |
| Total agent local storage(64-bit DBM1 prv var) | 92 MB |
| Total system local storage(64-bit DBM1 prv var) | 65 MB |
| Total buffer mgr storage(31-bit DBM1 prv var) | 1 MB |
| Total RID pool storage | 1 MB |
| Total compression dictionary storage | 12 MB |
Virtual storage status summary report (BSTATSUM)

The following figure shows a sample of the Virtual storage status summary report (BSTATSUM).

Figure 154: Virtual storage status summary report (BSTATSUM)

RID list failures report (BRIDLIST)

The RID list failures report (BRIDLIST) displays the RID list failures by DB2 subsystem. The following figure shows a sample of the BRIDLIST report.

Figure 155: RID list failures report (BRIDLIST)
Audit reports

The reports in this section are sample Data Collector audit reports.

The following reports are included:

Table 171: Data Collector audit reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAUDTAUT</td>
<td>DB2 authorization failures</td>
<td>“DB2 authorization failures report (BAUDTAUT)” on page 528</td>
</tr>
<tr>
<td>BTHAUDIT</td>
<td>Audit event history</td>
<td>“Audit event history report (BTHAUDIT)” on page 529</td>
</tr>
<tr>
<td>BDB2UTIL</td>
<td>DB2 utility events</td>
<td>“DB2 utility events report (BDB2UTIL)” on page 530</td>
</tr>
</tbody>
</table>

DB2 authorization failures report (BAUDTAUT)

The following figure shows a sample of the DB2 authorization failures report (BAUDTAUT).

Figure 156: DB2 authorization failures report (BAUDTAUT)
Audit reports

Audit event history report (BTHAUDIT)

The following figure shows a sample of the Audit event history report (BTHAUDIT).

Figure 158: Audit event history report (BTHAUDIT)
DB2 utility events report (BDB2UTIL)

The following figure shows a sample of the DB2 utility events report (BDB2UTIL).

![DB2 utility events report (BDB2UTIL)](image)

I/O activity reports

The reports in this section are sample I/O activity reports. Each of the I/O activity reports aggregates the data fields by sub-interval; the default is 5 minute sub-intervals.

**Note**

You can override the interval specifications by using the INTERVAL control syntax in batch report SYSIN.

The following reports are included:
Table 172: Data Collector I/O activity reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSUM</td>
<td>I/O summary report by DB2</td>
<td>“I/O summary report by DB2 (BIOSUM)” on page 531</td>
</tr>
<tr>
<td>BIOSUMBP</td>
<td>I/O summary detail Buffer Pool report by DB2 and interval</td>
<td>“I/O summary detail buffer pool report by DB2 and interval (BIOSUMBP)” on page 533</td>
</tr>
<tr>
<td>BIOSUMED</td>
<td>I/O summary detail EDM Pool report by DB2 and interval</td>
<td>“I/O summary detail EDM Pool report by DB2 and interval (BIOSUMED)” on page 535</td>
</tr>
<tr>
<td>BIOSUMLG</td>
<td>I/O summary detail Active Log report by DB2 and interval</td>
<td>“I/O summary detail active log report by DB2 and interval (BIOSUMLG)” on page 537</td>
</tr>
<tr>
<td>BIOSUMAR</td>
<td>I/O summary detail Archive Log report by DB2 and interval</td>
<td>“I/O summary detail archive log report by DB2 and interval (BIOSUMAR)” on page 538</td>
</tr>
<tr>
<td>BIOSUMBS</td>
<td>I/O summary detail BSDS report by DB2 and interval</td>
<td>“I/O summary detail BSDS report by DB2 and interval (BIOSUMBS)” on page 539</td>
</tr>
<tr>
<td>BIOSUMXI</td>
<td>I/O summary detail Cross Invalidation Activity report by DB2 and interval</td>
<td>“I/O summary detail cross invalidation activity report by DB2 and interval (BIOSUMXI)” on page 540</td>
</tr>
</tbody>
</table>

I/O summary report by DB2 (BIOSUM)

The I/O summary report by DB2 (BIOSUM) is an overall summary report that aggregates all the selected data into one summarization at the DB2 member level. The report contains a summary section for each of the following data categories:

- Buffer pool
- EDM pool
- Active log
- Archive log
- BSDS
- XI activity
The report is based on DB2 performance trace IFCIDs 6-10, 29-30, 34-41, 114-116, 119-120, and 255. The following figure shows a sample of the BIOSUM report.

**Figure 160: I/O summary report by DB2 (BIOSUM)**

```
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Data</th>
<th>Subsystem</th>
<th>Ver.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>DGR</td>
<td>10.1</td>
</tr>
</tbody>
</table>
```

**BIOSUM : IO ACTIVITY SUMMARY**

<table>
<thead>
<tr>
<th>Buffer Pool</th>
<th>Totals</th>
<th>Average</th>
<th>Elapsed</th>
<th>EDM Pool</th>
<th>CT/PT/OBD Loads</th>
<th>References</th>
<th>Avg Len</th>
<th>Avg Len</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**I/O activity reports**

```
Figure 160: I/O summary report by DB2 (BIOSUM)

The report is based on DB2 performance trace IFCIDs 6-10, 29-30, 34-41, 114-116, 119-120, and 255. The following figure shows a sample of the BIOSUM report.

**Figure 160: I/O summary report by DB2 (BIOSUM)**

```
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Data</th>
<th>Subsystem</th>
<th>Ver.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>DGR</td>
<td>10.1</td>
</tr>
</tbody>
</table>
```
I/O summary detail buffer pool report by DB2 and interval (BIOSUMBP)

The following figure shows a sample of the I/O summary detail buffer pool report by DB2 and interval (BIOSUMBP).

**Note**

The report is based on DB2 performance I/O trace IFCIDs 6-10, and 107.

Figure 161: I/O summary detail buffer pool report by DB2 and interval (BIOSUMBP)

<table>
<thead>
<tr>
<th>Location: DEEF</th>
<th>MBR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBSYSTEM: DEEF</td>
<td>VER: 10.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTERVAL BEGIN - END</th>
<th>TOTAL</th>
<th>ELAPSED</th>
<th>TYPE</th>
<th>ELAPSED</th>
<th>% WITH ID</th>
<th>WRITE REQUESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/28 14:00 - 05/28 14:05</td>
<td>3</td>
<td>00.010170</td>
<td>1</td>
<td>0.00</td>
<td>0</td>
<td>SYNCH NO</td>
</tr>
<tr>
<td>05/28 14:05 - 05/28 14:10</td>
<td>10</td>
<td>00.007655</td>
<td>2</td>
<td>0.00</td>
<td>0</td>
<td>SYNCH NO</td>
</tr>
<tr>
<td>05/28 14:05 - 05/28 14:10</td>
<td>2</td>
<td>00.015928</td>
<td>3</td>
<td>0.00</td>
<td>0</td>
<td>SYNCH NO</td>
</tr>
<tr>
<td>05/28 14:05 - 05/28 14:10</td>
<td>10</td>
<td>00.002520</td>
<td>5</td>
<td>0.00</td>
<td>0</td>
<td>SYNCH NO</td>
</tr>
<tr>
<td>05/28 14:05 - 05/28 14:10</td>
<td>3</td>
<td>00.000286</td>
<td>7</td>
<td>0.00</td>
<td>0</td>
<td>SYNCH NO</td>
</tr>
</tbody>
</table>

**Note**

Appendix D  Sample Data Collector reports 533

I/O activity reports
### I/O Activity Reports

**Subsystem:** DEEF  
**Version:** 10.1

<table>
<thead>
<tr>
<th>INTERVAL BEGIN - END</th>
<th>PLAN NAME</th>
<th>PRIME AUTHID</th>
<th>AVERAGE TYPE</th>
<th>ELAPSED</th>
<th>AVERAGE</th>
<th>ELAPSED</th>
<th>% READ</th>
<th>PAGES</th>
<th>CAST</th>
<th>AVERAGE</th>
<th>PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>05/28 14:05 - 05/28 14:10</strong></td>
<td>RDHJMB</td>
<td>332</td>
<td>SYNCH</td>
<td>00:00:1725</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>DSNETP2</td>
<td>0</td>
<td>SEQPF</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
<td>N/P</td>
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<td>N/P</td>
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<td>22</td>
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**I/O Summary Details for Buffer Pool**

11/04/14 08:44:06  Page 3

**Location:** DEEF  
**D/S Group:** MBR:  
**Subsystem:** DEEF  
**Version:** 10.1

**I/O Summary Details: Buffer Pool**

**Data From:** 05/28/2013 14:03:07  
**To:** 05/29/2013 12:22:23

---

*MainView for DB2 Performance Reporter User Guide*
I/O summary detail EDM Pool report by DB2 and interval (BIOSUMED)

The following figure shows a sample of the I/O summary detail EDM Pool report by DB2 and interval (BIOSUMED).

**Note**

The report is based on DB2 performance trace IFCIDs 29 and 30.

Figure 162: I/O summary detail EDM Pool report by DB2 and interval (BIOSUMED)
### BIOSUMED: IO SUMMARY DETAIL: EDM POOL

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#### I/O SUMMARY DETAILS: EDM POOL

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#### I/O SUMMARY DETAILS: EDM POOL

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### I/O summary detail active log report by DB2 and interval (BIOSUMLG)

The following figure shows a sample of the I/O summary detail active log report by DB2 and interval (BIOSUMLG).

**Note**

The report is based on DB2 performance trace IFCIDs 34-39.

---

**Figure 163: I/O summary detail active log report by DB2 and interval (BIOSUMLG)**

---

### I/O activity reports

Appendix D  Sample Data Collector reports 537
I/O summary detail archive log report by DB2 and interval (BIOSUMAR)

The following figure shows a sample of the I/O summary detail archive log report by DB2 and interval (BIOSUMAR).
Note

The report is based on DB2 performance trace IFCIDs 36-37, 40-41, and 114-116.

Figure 164: I/O summary detail archive log report by DB2 and interval (BIOSUMAR)

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<td></td>
<td></td>
<td>READ FROM TAPE</td>
<td>0</td>
<td>N/P</td>
<td>DEALLOCATE</td>
<td>1</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
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<td>1</td>
<td>01.677667</td>
<td>OPEN</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OTHER</td>
<td>6</td>
<td>00.220538</td>
<td>HSM RECALL</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
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<td>BLOCKS/OFFLOAD</td>
<td>1439.00</td>
<td>CATALOG LOCATE</td>
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<tr>
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** DATASET TOTAL **

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<tbody>
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<td>DEALLOCATE</td>
<td>1</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFFLOADS</td>
<td>1</td>
<td>01.677667</td>
<td>OPEN</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OTHER</td>
<td>6</td>
<td>00.220538</td>
<td>HSM RECALL</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
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<td>CATALOG LOCATE</td>
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* GRAND TOTAL *

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<th>OTHER WAITS</th>
<th>TOTAL</th>
<th>ELAPSED</th>
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<td>0</td>
<td>N/P</td>
<td>ALLOCATE</td>
<td>1</td>
<td>00.286361</td>
</tr>
<tr>
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<td>0</td>
<td>N/P</td>
<td>DEALLOCATE</td>
<td>1</td>
<td>00.271016</td>
</tr>
<tr>
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<td></td>
<td>OFFLOADS</td>
<td>1</td>
<td>01.677667</td>
<td>OPEN</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OTHER</td>
<td>6</td>
<td>00.220538</td>
<td>HSM RECALL</td>
<td>2</td>
<td>00.271016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BLOCKS/OFFLOAD</td>
<td>1439.00</td>
<td>CATALOG LOCATE</td>
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<td>N/P</td>
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</tr>
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</tr>
</tbody>
</table>

I/O summary detail BSDS report by DB2 and interval (BIOSUMBS)

The following figure shows a sample of the I/O summary detail BSDS report by DB2 and interval (BIOSUMBS).

Note

The report is based on DB2 performance trace IFCIDs 34-35, 119, and 120.

Figure 165: I/O summary detail BSDS report by DB2 and interval (BIOSUMBS)
The following figure shows a sample of the I/O summary detail cross invalidation activity report by DB2 and interval (BIOSUMXI).

**Note**

The report is based on DB2 performance trace IFCID 255.

---

I/O summary detail cross invalidation activity report by DB2 and interval (BIOSUMXI)

**Figure 166: I/O summary detail cross invalidation activity report by DB2 and interval (BIOSUMXI)**

<table>
<thead>
<tr>
<th>LOCATION: DEEF</th>
<th>D/S GROUP:</th>
<th>MBR: DEEF</th>
<th>SUBSYSTEM: DEEF</th>
<th>VER: 10.1</th>
<th>I/O SUMMARY DETAILS: CROSS INVALIDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>BIOSUMXI: IO SUMMARY DETAIL: XI</td>
<td>08/28/14 11:15:19</td>
<td>PAGE 1</td>
</tr>
<tr>
<td>INTERVAL BEGIN - END</td>
<td>PRIME AUTHID</td>
<td>PLAN NAME</td>
<td>DBID</td>
<td>OBID</td>
<td>PIECE#</td>
</tr>
<tr>
<td>08/26 15:19 - 08/26 15:24</td>
<td>RSNHMB</td>
<td>RDWJMB</td>
<td>0001</td>
<td>005F</td>
<td>00</td>
</tr>
<tr>
<td>08/26 15:19 - 08/26 15:24</td>
<td>RSNHMB</td>
<td>RDWJMB</td>
<td>0001</td>
<td>005F</td>
<td>00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>****</td>
<td>****</td>
<td>**</td>
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</tbody>
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I/O summary detail cross invalidation activity report by DB2 and interval (BIOSUMXI)
### Appendix D  Sample Data Collector reports

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<thead>
<tr>
<th>PRIME AUTHID</th>
<th>DBID</th>
<th>OBID</th>
<th>PIECENO</th>
<th>PAGE# (HEX)</th>
<th>BPID</th>
<th>GPOOL</th>
<th>DASD</th>
<th>GPPOOL</th>
<th>DASD</th>
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<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** TOTAL**  ****   ****    **        ******     ******          0        30            0         0
Locking activity reports

The reports in this section are sample lock trace activity reports. The batch lock trace activity reports provide the following reports for DB2 performance lock trace data:

- Summary reports
- Lock trace reports
- Timeout report
- Deadlock report

**Summary reports**

The lock trace activity summary reports summarize the associated events across the entire selected interval, and by up to 2 selected GROUPBY qualifiers. The default GROUPBY qualifiers are AUTHID and PLAN.

The reports automatically summarize by lock resource name, and produce sub-totals at the main grouping levels.

The following reports are included:

<table>
<thead>
<tr>
<th>Table 173: Data Collector locking activity—summary reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>BLKSUMSU</td>
</tr>
<tr>
<td>BLKSUMLO</td>
</tr>
<tr>
<td>BLKSUMDT</td>
</tr>
</tbody>
</table>

**Lock trace reports**

The lock trace reports display details from each associated event record in chronological order, without summarization.
The following reports are included:

### Table 174: Data Collector locking activity—lock trace reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLKTRCSU</td>
<td>Lock trace suspensions report</td>
<td>“Lock trace suspensions report (BLKTRCSU)” on page 546</td>
</tr>
<tr>
<td>BLKTRCLO</td>
<td>Lock trace lockout report</td>
<td>“Lock trace lockout report (BLKTRCLO)” on page 547</td>
</tr>
<tr>
<td>BLKTRCDT</td>
<td>Lock trace event detail report</td>
<td>“Lock trace event detail report (BLKTRCDT)” on page 549</td>
</tr>
</tbody>
</table>

#### Timeout report

The following reports are included:

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTIMEOUT</td>
<td>DB2 timeout report</td>
<td>“DB2 timeout report (BTIMEOUT)” on page 551</td>
</tr>
</tbody>
</table>

#### Deadlock report

The following reports are included:

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDEADLOCK</td>
<td>DB2 deadlock report</td>
<td>“DB2 deadlock report (BDEADLCK)” on page 551</td>
</tr>
</tbody>
</table>

### Lock summary suspensions report (BLKSUMSU)

The following figure shows a sample of the lock summary suspensions report (BLKSUMSU).

**Note**

This report is based on DB2 performance lock trace IFCIDs 44-45, 213-216, 226, and 227.

---

**Figure 167: Lock summary suspensions report (BLKSUMSU)**
Lock summary lockout report (BLKSUMLO)

The following figure shows a sample of the lock summary lockout report (BLKSUMLO).

Note
This report is based on DB2 performance lock trace IFCIDs 172, and 196.

Figure 168: Lock summary lockout report (BLKSUMLO)
Lock summary detail report (BLKSUMDT)

The following figure shows a sample of the lock summary detail report (BLKSUMDT).

This report is based on DB2 performance lock trace IFCID 21.

---

**Figure 169: Lock summary detail report (BLKSUMDT)**

<table>
<thead>
<tr>
<th>Location: DGR</th>
<th>Data From: 08/21/2013 13:44:57</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/S GRP: DSNDR</td>
<td>T0: 08/22/2013 11:27:17</td>
</tr>
<tr>
<td>MBR: DGR1</td>
<td>PAGE     1</td>
</tr>
<tr>
<td>VER: 10.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location: DGR</th>
<th>Data From: 08/19/2013 12:05:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/S GRP: DSNDR</td>
<td>T0: 08/21/2013 13:49:24</td>
</tr>
<tr>
<td>MBR: DGR1</td>
<td>PAGE     1</td>
</tr>
<tr>
<td>VER: 10.1</td>
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</table>

**Prime Authid**: RDHJMB

**Plan Name**: DSNTEP2

---

### Lock Summary Report - Lockouts

<table>
<thead>
<tr>
<th>Resource</th>
<th>Total Requests</th>
<th>Local XEs</th>
<th>Request Type</th>
<th>Req Lock Change</th>
<th>Type LOCK Count</th>
<th>Member</th>
<th>Plan</th>
<th>Connect</th>
<th>Corrid</th>
<th>Blocker/Holder</th>
<th>Waiter</th>
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</table>

---

Note: Appendix D  Sample Data Collector reports 545

---

Locking activity reports
Lock trace suspensions report (BLKTRCSU)

The following figure shows a sample of the lock trace suspensions report (BLKTRCSU).

Note

This report is based on DB2 performance lock trace IFCIDs 44-45, 213-216, 226, and 227.

Figure 170: Lock trace suspensions report (BLKTRCSU)

<table>
<thead>
<tr>
<th>Event Timestamp</th>
<th>Event Type</th>
<th>Name</th>
<th>Event Specific Data</th>
</tr>
</thead>
</table>
Lock trace lockout report (BLKTRCLO)

The following figure shows a sample of the lock trace lockout report (BLKTRCLO).

**Note**

This report is based on DB2 performance lock trace IFCIDs 172 and 196.

---

**Figure 171: Lock trace lockout report (BLKTRCLO)**

---

**Locking activity reports**

Appendix D  Sample Data Collector reports 547
Locking activity reports

08/21/13 15:39:35.72159100 DEADLOCK RESRC CNT: 2 INTVL: 79119 TIME DETECTED: 15:39:35.69221200

VICTIM THREAD IDENTIFICATION

LOCATION: DGR

CONN : UTILITY MEMBER: DGR1
THDTK: 42F80000 CORRID: BARTDED1
WKUNT: 02CF002729852720
EUID : RDHJMB
WSNAM: BATCH
TXNAM: BARTDEAD
PROGM: ...D
COLL : DSNTEP2
LOC : 18DAA9E2006A09BA
STMID: 0000000000000000  TYPE: DYNAMIC


LOCATION: DGR

CONN : BATCH MEMBER: DGR1
THDTK: 42E70000 CORRID: BARTDEAD
WKUNT: 02CF002729852720
EUID : RDHJMB
WSNAM: BATCH
TXNAM: BARTDEAD
PROGM: DSNTEP2
COLL : DSNTEP2
LOC : 18DAA9E2006A09BA
STMID: 0000000000000000  TYPE: DYNAMIC

08/21/13 15:44:50.91432800 DEADLOCK RESRC CNT: 2 INTVL: 79182 TIME DETECTED: 15:44:50.86231900

VICTIM THREAD IDENTIFICATION

LOCATION: DGR

CONN : UTILITY MEMBER: DGR1
THDTK: 42E70000 CORRID: BARTDEAD
WKUNT: 02CF002729852720
EUID : RDHJMB
WSNAM: BATCH
TXNAM: BARTDEAD
PROGM: ...D
COLL : DSNTEP2
LOC : 18DAA9E2006A09BA
STMID: 0000000000000000  TYPE: DYNAMIC
Lock trace event detail report (BLKTRCDT)

The following figure shows a sample of the lock trace event detail report (BLKTRCDT).

**Note**

This report is based on DB2 performance lock trace IFCIDs 20-21, 44-45, 172, 196, 213-216, 218, 226-227, and 337.

**Figure 172: Lock trace event detail report (BLKTRCDT)**
Locking activity reports

<table>
<thead>
<tr>
<th>Location: DGR</th>
<th>D/S GRP: DSNDB06</th>
<th>MBR: DBA01</th>
<th>VER: 10.1</th>
<th>LOCK SUMMARY TRACE - DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMAUTH: DMRQA01</td>
<td>CONNECT: DB2CALL</td>
<td>CORRNAME: CYRANQXT</td>
<td>CONNTYPE: DB2 CALL</td>
<td></td>
</tr>
<tr>
<td>DGRAUTH: DMRQA01</td>
<td>PLAN: DSTK1LD</td>
<td>CORRID: CYRANQXT</td>
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<td></td>
</tr>
<tr>
<td>ENDSER: DMRQA01</td>
<td>WSNAME: DB2CALL</td>
<td>TRXNAME: CYRANQXT</td>
<td></td>
<td></td>
</tr>
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<td>LUWID: USBMCN01.DGR1LU.CBD60B56B971</td>
<td>ACE ADDR: 226C9EF0</td>
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<table>
<thead>
<tr>
<th>EVENT TIME</th>
<th>EVENT</th>
<th>LOCK TYPE</th>
<th>LOCK RESOURCE NAME</th>
<th>EVENT SPECIFIC DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/19/13 11:39:38.79671300 LOCK</td>
<td>SYSLGRNG REC DSNDB06 .DSN55SH01.LGRN.0000000000</td>
<td>LOCK STATE: X</td>
<td>XES FORCE: N</td>
<td></td>
</tr>
</tbody>
</table>

| 08/19/13 11:39:38.79882300 LOCK | SYSLGRNG REC DSNDB06 .DSN56SH02.LGRN.0000000000 | LOCK STATE: X | XES FORCE: N |

| 08/19/13 11:39:38.79905500 NOTIFY | NOTIFY | NOTIFY MSG SENDING | RESUME RSN: TFG045 |

| 08/19/13 11:39:38.80070700 LOCK | DATA PAGE | LOCK STATE: X | XES FORCE: N |

| 08/19/13 11:39:38.80081100 LOCK | DATA PAGE | LOCK STATE: X | XES FORCE: N |
DB2 timeout report (BTIMEOUT)

The following figure shows a sample of the DB2 timeout report (BTIMEOUT).

**Note**

This report is based on DB2 performance lock trace IFCID 196.

---

Figure 173: DB2 timeout report (BTIMEOUT)

```plaintext
1  BTIMEOUT: DB2 TIMEOUTS 01/07/15 16:53:24 PAGE 1
2
3 01/06/15  01:27:39  TIMEOUT INTVL:   60        TIMEOUT CNT:    1        NMBR CONFLICTS:    1
4 RESOURCE: DSNDB06 .SYSTSTPT.RLCK.0000008200   DBID/PSID: 0006. 07DC
5
6  +-------------------------------------------------------------------------------------------------------------------------------------
7  | 01/06/15  01:27:39  TIMEOUT INTVL:   60        TIMEOUT CNT:    1        NMBR CONFLICTS:    1 |
8  | RESOURCE: DSNDB06 .SYSTSTPT.RLCK.0000008200   DBID/PSID: 0006. 07DC |
9  | STATE : U  DURATION : MANUAL  STMT ID : 00000000 |
10  | AUTHID : IOA  CORRID : ARUFFPR  END USER ID : IOA |
11  | CONNECTID: DB2CALL  PLAN : ARU1020I  EU TRN ID : ARUFFPR |
12  | CONNTYPE : DB2 UTILITY  OPID : IOA  EU WEK STA : DB2CALL |
13  | NETID : USBCNO1  LUWID : USBCNO1.DEFFLU.CE506F9F2E75 |
14  | DS MEMBER: DS GROUP : LOCATION : DEFF |
15  |
16  |
17  | 01/06/15  01:41:34  TIMEOUT INTVL:   60        TIMEOUT CNT:    1        NMBR CONFLICTS:    1 |
18  | RESOURCE: DSNDB06 .SYSTSIKS.RLCK.0000000200   DBID/PSID: 0006. 07DC |
19  | STATE : S  DURATION : MANUAL  STMT ID : 00000000 |
20  | AUTHID : IOA  CORRID : WURFF$M2  END USER ID : IOA |
21  | CONNECTID: DB2CALL  PLAN : ARUDEV5  EU TRN ID : WURFF$M2 |
22  | CONNTYPE : DB2 CALL  OPID : IOA  EU WEK STA : DB2CALL |
23  | NETID : USBCNO1  LUWID : USBCNO1.DEFFLU.CE5073194421 |
24  | DS MEMBER: DS GROUP : LOCATION : DEFF |
25  |
26  |
27  |
28  +-------------------------------------------------------------------------------------------------------------------------------------
```

DB2 deadlock report (BDEADLCK)

The following figure shows a sample of the DB2 deadlock report (BDEADLCK).
Figure 174: DB2 deadlock report (BDEADLCK)

This report is based on DB2 performance lock trace IFCID 172.
SQL activity reports

The reports in this section are sample SQL activity reports. The batch SQL activity reports provide the following reports:

- A summary report
- Detail trace reports

**Note**
Each of the SQL activity reports has two versions; one version has workload summaries, and one version does not.

The following workload summaries are provided in the workload version of each report:

<table>
<thead>
<tr>
<th>Type</th>
<th>IFCIDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highlights</td>
<td>All IFCIDs listed below</td>
</tr>
<tr>
<td>Data capture</td>
<td>188</td>
</tr>
<tr>
<td>Exits</td>
<td>11,12,19</td>
</tr>
<tr>
<td>IO</td>
<td>6-10</td>
</tr>
<tr>
<td>Lock suspend</td>
<td>44, 45, 213-216, 226, 227</td>
</tr>
<tr>
<td>Pg/row lock</td>
<td>20, 218</td>
</tr>
<tr>
<td>Scan</td>
<td>15-18</td>
</tr>
<tr>
<td>RID</td>
<td>125</td>
</tr>
<tr>
<td>Parallelism</td>
<td>221</td>
</tr>
<tr>
<td>Sort</td>
<td>95, 96</td>
</tr>
<tr>
<td>UDF</td>
<td>324</td>
</tr>
<tr>
<td>Host vars</td>
<td>247</td>
</tr>
</tbody>
</table>

**Summary reports**

The summary report supports GROUPBY thread summarization with the standard thread qualifiers, and summarizes SQL activity by package.
The following reports are included:

### Table 175: Data Collector SQL activity—summary reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSQSUMP</td>
<td>Summary SQL by PGM/PKG</td>
<td>“Summary SQL report by PGM/PKG (BSQSUMP)” on page 555</td>
</tr>
<tr>
<td>BSQSUMPW</td>
<td>Summary SQL by PGM/PKG with workloads</td>
<td>“Summary SQL report by PGM/PKG with workloads (BSQSUMPW)” on page 556</td>
</tr>
</tbody>
</table>

### Detail trace reports

The detail trace reports report threads separately and summarize SQL event data at the respective levels.

The following reports are included:

### Table 176: Data Collector SQL activity—detail trace reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Title</th>
<th>Sample report</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSQTRCP</td>
<td>Thread SQL trace summary by PGM/PKG</td>
<td>“Thread SQL trace summary report by PGM/PKG (BSQTRCP)” on page 557</td>
</tr>
<tr>
<td>BSQTRCPW</td>
<td>Thread SQL trace summary by PGM/PKG with workloads</td>
<td>“Thread SQL trace summary report by PGM/PKG with workloads (BSQTRCPW)” on page 558</td>
</tr>
<tr>
<td>BSQTRCS</td>
<td>Thread SQL trace summary by PGM/PKG and statement number</td>
<td>“Thread SQL trace summary report by PGM/PKG and statement number (BSQTRCS)” on page 559</td>
</tr>
<tr>
<td>BSQTRCSW</td>
<td>Thread SQL trace summary by PGM/PKG and statement number with workloads</td>
<td>“Thread SQL trace summary report by PGM/PKG and statement number with workloads (BSQTRCSW)” on page 560</td>
</tr>
<tr>
<td>BSQTRCT</td>
<td>Thread SQL trace by occurrence—event timestamp</td>
<td>“Thread SQL trace report by occurrence—event timestamp (BSQTRCT)” on page 561</td>
</tr>
<tr>
<td>BSQTRCTW</td>
<td>Thread SQL trace by occurrence—event timestamp—with workloads</td>
<td>“Thread SQL trace report by occurrence—event timestamp—with workloads (BSQTRCTW)” on page 562</td>
</tr>
<tr>
<td>BSQLIX</td>
<td>SQL create thread index</td>
<td>“SQL create thread index report (BSQLIX)” on page 563</td>
</tr>
<tr>
<td>BSQLLT</td>
<td>SQL long trace</td>
<td>“SQL long trace report (BSQLLT)” on page 563</td>
</tr>
<tr>
<td>BSQTRCCX</td>
<td>SQL compatibility exception trace by event</td>
<td>“SQL compatibility exception trace by event report (BSQTRCCX)” on page 564</td>
</tr>
</tbody>
</table>
Summary SQL report by PGM/PKG (BSQSUMP)

The following figure shows a sample of the summary SQL report by PGM/PKG (BSQSUMP).

**Note**

This report is based on IFCIDs 3, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 97, 108-109, 174-175, 177, 183, 237, and 239.

**Figure 175: Summary SQL report by PGM/PKG (BSQSUMP)**

<table>
<thead>
<tr>
<th>PACKAGE/PGM NAME</th>
<th>COUNT</th>
<th>AVG ELAPSED</th>
<th>AVG TCBTIME</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMRCAT4</td>
<td>1</td>
<td>00:00.712820</td>
<td>00.006340</td>
<td>PKG: DGR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACQUIRE: U</td>
</tr>
<tr>
<td>SQL STATEMENT/EVENT</td>
<td>COUNT</td>
<td>AVG ELAPSED</td>
<td>AVG CPU TIME</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>FETCH</td>
<td>6</td>
<td>00:00.117883</td>
<td>00:00.000464</td>
<td></td>
</tr>
<tr>
<td>OPEN</td>
<td>3</td>
<td>00:00.000072</td>
<td>00:00.000066</td>
<td></td>
</tr>
<tr>
<td>CLOSE</td>
<td>3</td>
<td>00:00.000141</td>
<td>00:00.000067</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PACKAGE/PGM NAME</th>
<th>COUNT</th>
<th>AVG ELAPSED</th>
<th>AVG TCBTIME</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVENT</td>
<td>COUNT</td>
<td>AVG ELAPSED</td>
<td>AVG CPU TIME</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>SIGNON</td>
<td>4</td>
<td>00:00.009411</td>
<td>00:00.001278</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PACKAGE/PGM NAME</th>
<th>COUNT</th>
<th>AVG ELAPSED</th>
<th>AVG TCBTIME</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVENT</td>
<td>COUNT</td>
<td>AVG ELAPSED</td>
<td>AVG CPU TIME</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>CREATE THREAD</td>
<td>1</td>
<td>00:00.000384</td>
<td>00:00.000381</td>
<td></td>
</tr>
<tr>
<td>ROLLBACK</td>
<td>1</td>
<td>00:00.000272</td>
<td>00:00.000120</td>
<td></td>
</tr>
<tr>
<td>TERMINATE</td>
<td>1</td>
<td>00:00.328342</td>
<td>00:00.000482</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PACKAGE/PGM NAME</th>
<th>COUNT</th>
<th>AVG ELAPSED</th>
<th>AVG TCBTIME</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGRRRS01</td>
<td>1</td>
<td>00:00.029301</td>
<td>00:00.004458</td>
<td>PKG: DGR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACQUIRE: U</td>
</tr>
</tbody>
</table>

Appendix D Sample Data Collector reports 555
Summary SQL report by PGM/PKG with workloads (BSQSUMPW)

The following figure shows a sample of the summary SQL report by PGM/PKG with workloads (BSQSUMPW).

Note
This report is based on IFCIDs 3, 6-12, 17-20, 22, 44, 45, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 95-97, 108, 109, 125, 174, 175, 177, 183, 188, 213-216, 218, 221, 226, 227, 237, 239, 247, 305, and 324.

Figure 176: Summary SQL report by PGM/PKG with workloads (BSQSUMPW)
Thread SQL trace summary report by PGM/PKG (BSQTRCP)

The following figure shows a sample of the thread SQL trace summary report by PGM/PKG (BSQTRCP).

**Note**

This report is based on IFCIDs 3, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 97, 108-109, 174-175, 177, 183, 237, and 239.

Figure 177: Thread SQL trace summary report by PGM/PKG (BSQTRCP)
The following figure shows a sample of the thread SQL trace summary report by PGM/PKG with workloads (BSQTRCPW).

**Note**

This report is based on IFCIDs 3, 6-12, 17-20, 22, 44, 45, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 95-97, 108, 109, 125, 174, 175, 177, 183, 188, 213-216, 218, 221, 226, 227, 237, 239, 247, 305, and 324.
Thread SQL trace summary report by PGM/PKG and statement number (BSQTRCS)

The following figure shows a sample of the thread SQL trace summary report by PGM/PKG and statement number (BSQTRCS).

**Note**

This report is based on IFCIDs 3, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 97, 108-109, 174-175, 177, 183, 237, and 239.

Figure 179: Thread SQL trace summary report by PGM/PKG and statement number (BSQTRCS)
Thread SQL trace summary report by PGM/PKG and statement number with workloads (BSQTRCSW)

The following figure shows a sample of the thread SQL trace summary report by PGM/PKG and statement number with workloads (BSQTRCSW).

**Note**

This report is based on IFCIDs 3, 6-12, 17-20, 22, 44, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 95-97, 108, 109, 125, 174, 175, 177, 183, 188, 213-216, 218, 221, 226, 227, 237, 239, 247, 305, and 324.

Figure 180: Thread SQL trace summary report by PGM/PKG and statement number with workloads (BSQTRCSW)
### Thread SQL trace report by occurrence— event timestamp (BSQTRCT)

The following figure shows a sample of the thread SQL trace report by occurrence—event timestamp.

**Note**

This report is based on IFCIDs 3, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 97, 108-109, 174-175, 177, 183, 237, and 239.

---

#### Figure 181: Thread SQL trace report by occurrence— event timestamp (BSQTRCT)

<table>
<thead>
<tr>
<th>EVENT/ NL-PROGRAM</th>
<th>TIMESTAMP</th>
<th>ELAPSED TIM</th>
<th>TCB TIME</th>
<th>DETAILS</th>
</tr>
</thead>
</table>
Thread SQL trace report by occurrence—event timestamp—with workloads (BSQTRCTW)

The following figure shows a sample of the thread SQL trace report by occurrence—event timestamp—with workloads (BSQTRCTW).

Note

This report is based on IFCIDs 3, 6-12, 17-20, 22, 44, 45, 53, 55, 58-62, 64-66, 68-75, 84-89, 92, 95-97, 108, 109, 125, 174, 175, 177, 183, 188, 213-216, 218, 221, 226, 227, 233, 237, 239, 247, 305, and 324.

Figure 182: Thread SQL trace report by occurrence—event timestamp—with workloads (BSQTRCTW)
SQL create thread index report (BSQLIX)

The following figure shows a sample of the SQL create thread index report (BSQLIX).

---

**Note**
This report is based on IFCID 73.

---

Figure 183: SQL create thread index report (BSQLIX)

1                       BSQLIX  : SQL CREATE THREAD INDEX                                12/12/14 09:31:27    PAGE     1

GROUP : DSNOGR              DGR                            SQL SUMMARY                            DB2 SUBSYSTEM: DGR1 10.
MEMBER: DGR1                                                                                      DB2 LOCATION : DGR
CREATE THREAD END TIME    CONNECT   CORRELATION   PRIMAUTH  ORIGAUTH  PLANNAME  REQUESTER         LUWID / ACE ADDRESS
------------------------  --------  ------------  --------  --------  --------  ----------------  ------------------------------
+  07/22/13 14:38:44.472148  RRSAF     DMRQA-CORRID  RDHJMB    RDHJMB    DGRRRS01                    USBMCN01.DGR1LU.CBB2FF25951B
317C4950
+  07/22/13 15:19:04.555903  DB2CALL   BARTMS1      RDHJMB2   RDHJMB2   DMRSEL01                    USBMCN01.DGR1LU.CBB30829B102
317C6180
+  07/23/13 10:50:47.620404  RRSAF     DMRQA-CORRID  RDHJMB    RDHJMB    DGRRRS01                    USBMCN01.DGR1LU.CBB40E0F2DC
3D695C20
+  07/23/13 11:04:40.775299  RRSAF     DMRQA-CORRID  RDHJMB    RDHJMB    DGRRRS01                    USBMCN01.DGR1LU.CBB4112A7A0
3D695970
+  08/15/13 16:22:16.845312  RRSAF     DMR-CORR16    DMRQA16   DMRQA16   DMRQAW16                    USBMCN01.DGR1LU.CBB1430D499A
257DD470
+  08/15/13 16:22:16.869641  RRSAF     DMR-CORR16    DMRQA16   DMRQA16   DMRQAW02                    USBMCN01.DGR1LU.CBB1430D6059
257DD470
+  08/15/13 16:25:49.300552  RRSAF     DMR-CORR09    DMRQA09   DMRQA09   DMRQAW09                    USBMCN01.DGR1LU.CBB1430F92B
257DD470
+  08/15/13 16:25:49.314340  RRSAF     DMR-CORR09    DMRQA09   DMRQA09   DMRQAW01                    USBMCN01.DGR1LU.CBB1430F614
257DD470
+  08/15/13 16:26:04.711728  RRSAF     DMR-CORR04    DMRQA04   DMRQA04   DMRQAW04                    USBMCN01.DGR1LU.CBB14336AC15
257DDF10
+  08/15/13 16:26:20.206812  RRSAF     DMRQA-CORRID  RDHJMB3   RDHJMB3   DGRRRS01                    USBMCN01.DGR1LU.CBB143D7F92B
257DDF10

---

SQL long trace report (BSQLLT)

The following figure shows a sample of the SQL long trace report (BSQLLT).

---

**Note**
This report is based on IFCIDs 6-12, 15-20, 22, 44, 45, 53, 55, 58-66, 68-75, 86-89, 95, 96, and 125.

---

Figure 184: SQL long trace report (BSQLLT)

1                       BSQLLT  : SQL LONG TRACE                                         12/12/14 09:44:40    PAGE     1

GROUP : DSNOGR              DGR                            SQL LONG TRACE                           DB2 SUBSYSTEM: DEEF 10.1
MEMBER:                                                                                      LOCATION: DEEF
CREATE THREAD END TIME:      N/P             N/P
CONNECT   : DEEF       CORRELATION: 010.COMCMA01       PRIMAUTH: SYSOPR      ORIGAUTH: SYSOPR    PLAN NAME:                    LUWID   : DEEF.DEEF1LU01.CBE695386578            ACE: 3DE371A0
START TIME    EVENT
------------  ----------------------  -------------------------------------------------------------------------------------------
+ 12:22:10.739  BGN ASYNC WRITE I/O     DBIO/OBIO: 0105     0066       WRITE TYPE: M     NBR OF PAGES TO WRITE :        1
  DBIO/OBIO: PMDBRK .TSPG1
  RC: 0     POOL :       25
+ 12:22:10.746  END WRITE I/O                                           RC:        0     ELAPSED               :   0.006052
+ 12:22:10.750  BGN ASYNC WRITE I/O     DBIO/OBIO: 0105     0066       WRITE TYPE: M     NBR OF PAGES TO WRITE :        1
  DBIO/OBIO: PMDBRK .TSPG1
  RC: 0     POOL :       25
+ 12:22:10.755  END WRITE I/O                                           RC:        0     ELAPSED               :   0.005396

---

Appendix D  Sample Data Collector reports 563
### SQL compatibility exception trace by event report (BSQTRCCX)

The following figure shows a sample of the SQL compatibility exception trace by event report.
Figure 185: SQL compatibility exception trace by event report (BSQTRCCX)

<table>
<thead>
<tr>
<th>EXEC CNT</th>
<th>STMT#</th>
<th>SECT#</th>
<th>TYPE</th>
<th>ISSUE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>245</td>
<td>1</td>
<td>DYNAMIC</td>
<td>1 DB2 9 SYSIBM.CHAR(DECIMAL-EXPR) USED</td>
</tr>
</tbody>
</table>
Sample audit reports

This section describes the audit reports produced by Performance Reporter.

Each of the reports listed in the following table are defined in a separate member in BBPARM:

<table>
<thead>
<tr>
<th>Report</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>“DB2 Audit Summary report (AUSUM)” on page 567</td>
<td>1-8</td>
</tr>
<tr>
<td>“DB2 Authorization Failures report (AUFAIL)” on page 569</td>
<td>1</td>
</tr>
<tr>
<td>“DB2 Authorization Control—GRANTs/REVOKEs report (AUDGRV)” on page 570</td>
<td>2</td>
</tr>
<tr>
<td>“DB2 Audited DDL Access report (AUDDL)” on page 571</td>
<td>3</td>
</tr>
<tr>
<td>“DB2 Audited DML Access report (AUDML)” on page 572</td>
<td>4 and 5</td>
</tr>
<tr>
<td>“DB2 DML at BIND report (AUDMLB)” on page 573</td>
<td>6</td>
</tr>
<tr>
<td>“DB2 AUTHID Change report (AUCHNG)” on page 575</td>
<td>7</td>
</tr>
<tr>
<td>“DB2 Audit Utility Access report (AUUTIL)” on page 576</td>
<td>8</td>
</tr>
<tr>
<td>“DB2 Audit Detail report (AUDTL)” on page 577</td>
<td>1-8</td>
</tr>
</tbody>
</table>

Rename or comment out the corresponding report requests from job DPRREPT for those audit classes not processed.

DB2 Audit Summary report (AUSUM)

The DB2 Audit Summary report (AUSUM) summarizes the audit records for each authorization ID and plan. The following figure shows a sample of the AUSUM report.

**Note**

The AUSUM report requires one or more of the audit classes 1 through 8 (TYPE2=AUSUM).
The report data is sorted by both AUTHID and PLAN (default). Table 177 on page 568 describes the columns on the report.

Table 177: DB2 Audit Summary report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>TOTAL AUDITS</td>
<td>Number of events from all selected audit types</td>
</tr>
<tr>
<td>AUTH FAILURE</td>
<td>Number of authorization failures</td>
</tr>
<tr>
<td>GRANT / REVOKE</td>
<td>Number of authorization GRANTs or REVOKEs</td>
</tr>
<tr>
<td>DDL ACCESS</td>
<td>Number of DDL operations against audited DB2 tables</td>
</tr>
<tr>
<td>DML READ ACCESS</td>
<td>Number of first READ attempts within a logical unit of work against audited DB2 tables</td>
</tr>
<tr>
<td>DML WRITE ACCESS</td>
<td>Number of first WRITE attempts within a logical unit of work against audited DB2 tables</td>
</tr>
<tr>
<td>DML AT BIND</td>
<td>Number of DML statements referenced during a static or dynamic BIND against audited DB2 tables</td>
</tr>
<tr>
<td>AUTHID CHANGE</td>
<td>Number of initial authorization ID establishments, changes, or attempted changes</td>
</tr>
<tr>
<td>UTILITY ACCESS</td>
<td>Number of utility trace records written against DB2 tables</td>
</tr>
</tbody>
</table>

The report data is sorted by both AUTHID and PLAN (default). Table 177 on page 568 describes the columns on the report.
DB2 Authorization Failures report (AUFAIL)

The DB2 Authorization Failures report (AUFAIL) provides data on authorization failures for each authorization ID and plan. The report identifies each user who attempted to access a DB2 object and failed due to lack of authorization. The following figure shows a sample of the AUFAIL report.

**Note**
The AUFAIL requires audit class 1 (TYPE2=AUDFAIL).

The report data is sorted by both AUTHID and PLAN (default). Table 178 on page 569 describes the columns on the report.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date of the authorization failure</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the authorization failure</td>
</tr>
<tr>
<td>AUTHID CHECKED</td>
<td>Authorization ID that caused the failure</td>
</tr>
<tr>
<td>PRIVILEGE</td>
<td>Operation (privilege) on which the failure occurred, such as SELECT, INSERT, BIND, ADD, or LOCK TABLE</td>
</tr>
<tr>
<td>OBJECT TYPE</td>
<td>DB2 object type, such as BUFFERPOOL, PLAN, or TABLESPACE</td>
</tr>
<tr>
<td>SOURCE OBJECT</td>
<td>Source DB2 table name or plan name involved in the authorization failure</td>
</tr>
<tr>
<td>SOURCE OWNER</td>
<td>Authorization ID of the owner of the source DB2 table</td>
</tr>
<tr>
<td>TARGET OBJECT</td>
<td>Target DB2 table name or plan name involved in the authorization failure</td>
</tr>
<tr>
<td>TARGET OWNER</td>
<td>Authorization ID of the owner of the target DB2 table</td>
</tr>
</tbody>
</table>
DB2 Authorization Control—GRANTS/REVOKEs report (AUDGRV)

The DB2 Authorization Control—GRANTS/REVOKEs report (AUDGRV) provides data on all GRANT and REVOKE statements for each authorization ID and plan. The following figure shows a sample of the AUDGRV report.

**Note**

It requires audit class 2 (TYPE2=AUDGRV).

---

**Figure 188: DB2 Authorization Control—GRANTS/REVOKEs report (AUDGRV)**

The report data is sorted by both AUTHID and PLAN (default). Table 179 on page 570 describes the columns on the report.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date of the GRANT or REVOKE operation</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the GRANT or REVOKE operation</td>
</tr>
<tr>
<td>GRANTOR/REVOKE</td>
<td>Authorization ID of the user issuing the GRANT or REVOKE</td>
</tr>
<tr>
<td>STMT TYPE</td>
<td>Statement type—either GRANT or REVOKE</td>
</tr>
<tr>
<td>OBJECT TYPE</td>
<td>DB2 object type of the GRANT or REVOKE, such as BUFFERPOOL, PLAN, or TABLESPACE</td>
</tr>
</tbody>
</table>
The DB2 Audited DDL Access report (AUDDL) provides DDL data for each authorization ID and plan. The report identifies DDL status changes (CREATE, DROP, ALTER) on audited tables. The following figure shows a sample of the AUDDL report.

Note
It requires audit class 3 (TYPE2=AUDDDL).

The report data is sorted by both AUTHID and PLAN (default). Table 180 on page 571 describes the columns on the report.

### Table 180: DB2 Audited DDL Access report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date of the audited DDL access</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the audited DDL access</td>
</tr>
<tr>
<td>TYPE</td>
<td>Type of access performed on the audited DB2 table, such as CREATE, ALTER, or DROP</td>
</tr>
<tr>
<td>TABLE NAME</td>
<td>Name of the accessed audited DB2 table</td>
</tr>
<tr>
<td>TABLE OWNER</td>
<td>User ID of the owner of the audited DB2 table accessed</td>
</tr>
<tr>
<td>TABLE CREATOR</td>
<td>Authorization ID of the creator of the DB2 table associated with the DDL access</td>
</tr>
<tr>
<td>TABLE OBID</td>
<td>Internal DB2 identification (OBID) of the table associated with the access</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Name of the database (or DBID) containing the audited DB2 table</td>
</tr>
<tr>
<td>SQL TEXT</td>
<td>Beginning of the text of the SQL statement accessing the audited DB2 table</td>
</tr>
</tbody>
</table>

**DB2 Audited DML Access report (AUDML)**

The DB2 Audited DML Access report (AUDML) contains DML data for each authorization ID and plan. The report identifies DML accesses to audited tables. The following figure shows a sample of AUDML.

*Note* It requires audit classes 4 and/or 5 (TYPE2=AUDDML).

**Figure 190: DB2 Audited DML Access report (AUDML)**

The report data is sorted by both AUTHID and PLAN (default). Table 181 on page 573 describes the columns on the report.
### Table 181: DB2 Audited DML Access report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date of the audited DML access</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the audited DML access</td>
</tr>
<tr>
<td>STMT TYPE</td>
<td>Type of access performed on the audited DB2 table</td>
</tr>
<tr>
<td>TABLE</td>
<td>Internal DB2 identification (OBID) of the table associated with the access</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Name of the database (or DBID) containing the audited DB2 table</td>
</tr>
<tr>
<td>PAGESET</td>
<td>Name of the page set (or OBID) containing the audited DB2 table</td>
</tr>
<tr>
<td>LOG RBA (HEX)</td>
<td>Log relative byte address of the unit of recovery in which the audited DB2 table was accessed</td>
</tr>
</tbody>
</table>

---

**DB2 DML at BIND report (AUDMLB)**

The DB2 DML at BIND report (AUDMLB) provides data on DML statements at BIND time for each authorization ID and plan. The report identifies DML statements referenced during a static or dynamic BIND against audited DB2 tables. The following figure shows a sample of AUDMLB.

*Note*  
It requires audit class 6 (TYPE2=AUDDMB).

**Figure 191: DB2 DML at BIND report (AUDMLB)**

<table>
<thead>
<tr>
<th>AUTHID</th>
<th>PLAN</th>
<th>DATE</th>
<th>TIME</th>
<th>PACKAGE</th>
<th>COLL ID</th>
<th>PROGRAM/DBRM</th>
<th>STATEMENT</th>
<th>STMT</th>
<th>TABLE</th>
<th>DATA</th>
<th>PRECOMPILE</th>
<th>RETURN CODE</th>
<th>SQL TEXT</th>
<th>SQL TEXT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.31</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.32</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.33</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.34</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.35</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.36</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.37</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.38</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.39</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.40</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.41</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.42</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.43</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.44</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.45</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.46</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.47</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 8</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MXW2</td>
<td>MXSIMLD</td>
<td>2000-05-07</td>
<td>12.33.48</td>
<td></td>
<td></td>
<td>DEPSURGD DELETE</td>
<td>58 23</td>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The report data is sorted by both AUTHID and PLAN (default). Table 182 on page 574 describes the columns on the report.

### Table 182: DB2 DML at BIND report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date of the BIND against an audited DB2 table</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the BIND against an audited DB2 table</td>
</tr>
<tr>
<td>PACKAGE COLL-ID</td>
<td>Package collection ID&lt;br&gt;This field is blank if the program is not bound as a package and does not belong to any package collection.</td>
</tr>
<tr>
<td>PROGRAM/DBRM</td>
<td>Name of the program or database request module (DBRM) containing the DML statement causing the BIND&lt;br&gt;This field contains the DBRM name for static BIND and the program name for dynamic BIND.</td>
</tr>
<tr>
<td>STMT TYPE</td>
<td>Type of DML statement issued; possible values are:</td>
</tr>
<tr>
<td></td>
<td>■ CLOSE&lt;br■ CREATE VIEW&lt;br■ DELETE&lt;br■ DESCRIBE&lt;br■ EXEC IMMED&lt;br■ EXECUTE&lt;br■ EXPLAIN&lt;br■ FETCH&lt;br■ INSERT&lt;br■ LOCK&lt;br■ OPEN&lt;br■ PREPARE&lt;br■ SEL-BQUERY&lt;br■ SEL-QUERY&lt;br■ UPDATE</td>
</tr>
<tr>
<td>SQL STMT NUMBER</td>
<td>SQL statement number in the program or DBRM</td>
</tr>
</tbody>
</table>
DB2 AUTHID Change report (AUCHNG)

The DB2 AUTHID Change report (AUCHNG) provides data on AUTHID change requests for each authorization ID and plan. AUTHIDs can be changed for a thread by a SET CURRENT S QLID statement, a CICS or IMS signon, an IMS, CICS, or TSO IDENTIFY request, or the translation of the AUTHID of a distributed request. The following figure shows a sample of the AUCHNG report.

The report requires audit class 7 (TYPE2=AUDCHG).

The report data is sorted by both AUTHID and PLAN (default). Table 183 on page 575 describes the columns on the report.

Table 183: DB2 AUTHID Change report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
</tbody>
</table>

The report data is sorted by both AUTHID and PLAN (default). Table 183 on page 575 describes the columns on the report.
<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>Date of the authorization ID change</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the authorization ID change</td>
</tr>
<tr>
<td>TYPE</td>
<td>Type of authorization change or establishment; possible values are ▪ SET CURRENT SQLID ▪ END OF IDENTIFY ▪ END OF SIGNON ▪ DISTR AUTH XLAT</td>
</tr>
<tr>
<td>ORIGINAL AUTHID</td>
<td>Original value of the primary authorization ID passed to the IDENTIFY or SIGNON authorization exit (before any changes by the authorization exits)</td>
</tr>
<tr>
<td>CURRENT AUTHID</td>
<td>Initial value of the authorization ID of the user issuing the change request before the request is executed</td>
</tr>
<tr>
<td></td>
<td>This column is valid only for SET CURRENT SQL and DISTR AUTH XLAT (distributed translation).</td>
</tr>
<tr>
<td>NEW/ATTEMPTED AUTHID</td>
<td>New value of the authorization ID of the user issuing the change request after the request is executed</td>
</tr>
<tr>
<td></td>
<td>For unsuccessful change requests, it is the value of the attempted change. This column is valid only for SET CURRENT SQL and DISTR AUTH XLAT (distributed translation).</td>
</tr>
<tr>
<td>SQL AUTHID</td>
<td>Initial value of the SQL authorization ID from the IDENTIFY or SIGNON exit</td>
</tr>
<tr>
<td>SECONDARY AUTHID(S)</td>
<td>Secondary authorization ID(s) set by the IDENTIFY or SIGNON exits</td>
</tr>
<tr>
<td></td>
<td>The number of secondary ID(s) and the first two values are shown.</td>
</tr>
<tr>
<td>CHANGE STATUS</td>
<td>Success or failure status of an authorization change request</td>
</tr>
<tr>
<td>TRANSLATE TYPE</td>
<td>Inbound or outbound connection messages showing where the translation actually occurred for distributed requests</td>
</tr>
</tbody>
</table>

**DB2 Audit Utility Access report (AUUTIL)**

The DB2 Audit Utility Access report (AUUTIL) provides utility data for each authorization ID and plan. The following figure shows a sample of the AUUTIL report.

*Note*

The report requires audit class 8 (TYPE2=AUDUTL).

---

**Figure 193: DB2 Audit Utility Access report (AUUTIL)**
The report data is sorted by both AUTHID and PLAN (default). Table 184 on page 577 describes the columns on the report.

Table 184: DB2 Audit Utility Access report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date the utility accessed the DB2 object</td>
</tr>
<tr>
<td>TIME</td>
<td>Time of the utility access against a DB2 table</td>
</tr>
<tr>
<td>UTILITY ID</td>
<td>ID of the utility specified by the user for the utility run</td>
</tr>
<tr>
<td>UTILITY NAME</td>
<td>Name of the executed utility</td>
</tr>
<tr>
<td>UTILITY PHASE</td>
<td>ID of the utility phase</td>
</tr>
<tr>
<td>UTILITY ITEM TYPE</td>
<td>Type of item involved in the current utility phase</td>
</tr>
<tr>
<td>PREV ITEM COUNT</td>
<td>Number of items in the previous utility phase</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Name of the database (or DBID) containing the audited DB2 object</td>
</tr>
<tr>
<td>PAGESET</td>
<td>Name of the page set (or OBID) containing the audited DB2 object</td>
</tr>
</tbody>
</table>

DB2 Audit Detail report (AUDTL)

The DB2 Audit Detail report (AUDTL) provides an overview of all audited activity per user. The following figure shows a sample of the AUDTL report.

*Note* - The report requires audit classes 1 through 8 (TYPE2=AUDSUM).

Figure 194: DB2 Audit Detail report (AUDTL)
Table 185 on page 578 describes the columns on the report.

Table 185: DB2 Audit Detail report column definitions

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHID</td>
<td>Authorization ID of the user accessing this DB2 system</td>
</tr>
<tr>
<td>PLAN</td>
<td>Plan name of the application program, transaction, or utility executed</td>
</tr>
<tr>
<td>DATE</td>
<td>Date the audit record was completed</td>
</tr>
<tr>
<td>TIME</td>
<td>Time the audit record was completed</td>
</tr>
<tr>
<td>AUDIT CATEGORY</td>
<td>Description of audit category, such as AUTH FAIL, DML READ, and so on</td>
</tr>
<tr>
<td>AUDIT TYPE</td>
<td>Supplementary description of audited authorization</td>
</tr>
</tbody>
</table>

Table 1

<table>
<thead>
<tr>
<th>AUTHID</th>
<th>PLAN</th>
<th>DATE</th>
<th>TIME</th>
<th>AUDIT CATEGORY</th>
<th>AUDIT TYPE</th>
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<td>TSM5</td>
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<td>07.42.43</td>
<td>AUTH CHANGE</td>
<td>SIGNON</td>
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</tbody>
</table>
Index

&DATE= 166
&TABLE= 166
&TABLE2= 166
&WHERE= 166
#DOMRPRT (report print JCL) 37

A

accelerator activity 176
accelerator modeling activity 177
Accounting Accelerator modeling trace report 482
Accounting detail short trace report 494
Accounting detail trace long report 490
accounting file creation, DPRDSMF program 103
Accounting summary exceptions short report 490
Accounting summary interval short report 488
Accounting summary load short report 487
Accounting summary long report 484
Accounting summary package short report 489
Accounting summary short report 487
accounting tables
detail table creation 101, 163
DMRABDCTL table 412
DMRABSUM table 412
DMRACDCTL table 391
DMRACSUM table 391
DMRAPPDTL table 424
DMRAPPSUM table 424
DMRAXDCTL table 433
DMRAXSUM table 433
DMRSXDTL table 385
DMRSXSUM table 385
summary table creation 147
Accounting thread detail report 495
accounting trace, starting 479
API, DB2 249
application termination 177
APPPROF statement/parameter 88

archive directory 33
AUCHNG report 575
AUDDL report 571
Audit event history report 529
audit reports
Audited DDL Access 571
Audited DML Access 572
AUTHID Change 575
Authorization Control 570
Authorization Failures 569
Detail 577
DML at BIND 573
Summary 567
Utility Access 576
audit reports, field definitions 306
audit tables
DMRAUADM table 467
DMRAUCHG table 456
DMRAUCMD table 464
DMRAUDDL table 447
DMRAUDMB table 453
DMRAUDML table 450
DMRAUFAL table 441
DMRAUGRV table 444
DMRAUTRC table 470
DMRAUUTL table 461
list of 437
audit trace, starting 480
AUDML report 572
AUDMLB report 573
AUDTL report 577
AUFAIL report 569
AUGRV report 570
AUSUM report 567
authorization management
performance data tables 340
statistics report 228
AUUTIL report 576
average service units 179
B
BACCPKSR report 497
BACCTACM report 482
BACCTDTR report 484
BACCTLTT report 484
BACCTSR report 487
BACCTSRD report 487
BACCTSRF report 488
BACCTSRP report 489
BACCTSRX report 490
BACCTST report 494
batch programs, DPRSMF
description 24
illustration 115
job control statements 101
batch programs, DPSUMLD
definition 25
error messages 152
illustration 124
job control statements 149
return codes 142, 152, 441
batch programs, JXREPT
illustration 169
job control statements 166
return codes 169
batch reporting 27, 98
batch reporting facility, DPRREPT 162
BAUDTAUT report 528
BBSAMP
DPJMIGR, table migration 26, 125
DPJSPIN, spin file allocation 111
DPRARC, archive data set creation 101
DPRARCNL, archive data set creation 101
DPRREPT, predefined reports 166
DPRRPT, daily reports 165
DPRSMF, SMF data extraction 115
DPRSMFN, SMF data extraction 115
DPRSUM, load process 149
DPRSUMNL, load process 149
member naming conventions 475
members for Performance Reporter tables 21
BDB2UTIL report 530
BDEADLCK
field descriptions, holder 329
field descriptions, waiter 330
BDEADLCK report 551
BIOSUM
field descriptions, active log 312
field descriptions, archive log 313
field descriptions, bootstrap dataset 317
field descriptions, buffer pool 314
field descriptions, cross invalidation activity
316
field descriptions, EDM pool 316
BIOSUM report 531
BIOSUMAR
field descriptions 309
BIOSUMAR report 538
BIOSUMBP report 533
BIOSUMBS
field descriptions 310
BIOSUMBS report 539
BIOSUMED report 535
BIOSUMLG
field descriptions 308
BIOSUMLG report 537
BIOSUMP
field descriptions 310
BIOSUMXI
field descriptions 311
BIOSUMXI report 540
BLKSUMDT
field descriptions 318
BLKSUMDT report 545
BLKSUMLO
field descriptions 320
BLKSUMLO report 544
BLKSUMSU
field descriptions 321
BLKSUMSU report 543
BLKTRCDT
field descriptions 322
BLKTRCDT report 549
BLKTRCLO
field descriptions, holder/blocker details 323
field descriptions, victim thread identification 325
field descriptions, waiter details 326
BLKTRCLO report 547
BLKTRCSU
field descriptions 324
BLKTRCSU report 546
BMC NGT Load 101
BRIDLIST report 527
BSQLIX report 563
BSQLLT report 563
BSQUMP report 555
BSQSUMPW
  field descriptions, exits 332
  field descriptions, highlights 332
  field descriptions, I/O activity 333
  field descriptions, lock suspension activity 334
  field descriptions, scan activity 335
BSQSUMPW report 556
BSQTRCCX report 564
BSQTRCP report 557
BSQTRCPW report 558
BSQTRCS report 559
BSQTRCSW
  field descriptions, page/row/LOB/XML locking 336
BSQTRCSW report 560
BSQTRCT report 561
BSQTRCTW report 562
BSTATDI report 501
BSTATDR report
  low or negative values in 49
  sample output 501
BSTATLT report 512
BSTATSTD report 522
BSTATSTL report 523
BSTATSTM report 524
BSTATSTX report 525
BSTATSUM report 525
BTHACDTL report 495
BTHAUDIT report 529
BTHDADTL report 499
BTHDASUM report 499
BTIMEOUT
  field descriptions, causing agent 327
  field descriptions, victim 328
BTIMEOUT report 551
buffer pool activity 180
  data for single buffer 162
  group 189
  performance data tables 340, 378
  read operations 233
  sort/merge 238
  statistics report 229
  write operations 240
buffer tables, DMRSBFDT table 378
changing
  report order 173
  table names 26
  time interval 172
class 1 elapsed time distribution 216
class 2 DB2 time 219
class 2 time distribution 217
class 3 suspensions 223
class 5 IFI time 221
close/open activity 274
code page, changing with TCCSID control statement 103
COMBINE= processing control statement 129
commands, counts of DB2 250
CONDBAT, field definition 258
control statements
  &DATE= 166
  &TABLE= 166
  &TABLE2= 166
  examples 140
  mbnames 166
  PLAN= 166
  See also SYSIN control statements 41
  SSID= 166
conventions
  SQL SELECT statements 171
conventions, documentation 14
CPU times 243
customizing reports 164, 170
D
daily reporting, BBSAMP DPRRPT 165
data capture
  accounting report 183
  performance data tables 340
  statistics report 244
data collector, reporting facilities
  overview 27
  record trace 94
  sample reports 481
Data Collector, reporting facilities
  output 85
  recommendations 98
data sets, used by data collector 28
data sharing 184
data sharing locking
  performance data tables 340
  statistics report 245
CCSID, changing with TCCSID control statement 103
data summary and purge process 147
date ranges, setting 168
DB2 API
   performance data tables 340
   statistics report 249
DB2 authorization failures report 528
DB2 commands
   performance data tables 340
   statistics report 250
DB2 deadlock report 551
DB2 performance reports table 154
DB2 statistics detail report 501
DB2 timeout report 551
DB2 utility events report 530
DB2LOAD statement/parameter 88
DCB attributes, DOMBRPT1 (produce printed reports) 37

DDF
   performance data tables 340, 369
   statistics reports 258
destinations, IFC 265
DPDSORT messages 150
DMRABDTL table 412
DMRABSUM table 412
DMRACDTL table 391
DMRACSUM table 391
DMRADDTL table 417
DMRADSUM table 417
DMRAPDTL table 424
DMRAPSUM table 424
DMRAUADM table 467
DMRAUCHG table 456
DMRAUCMD table 464
DMRAUDDL table 447
DMRAUDMB table 453
DMRAUDML table 450
DMRAUFAF table 163, 441
DMRAUGRV table 444
DMRAUSUM table 438
DMRAUTRC table 470
DMRAUUTL table 461
DMRAXDTL table 433
DMRAXSUM table 433
DMRRPT 166
DMRSBFDT table 378
DMRSFBDT table 378
DMRSTADT table 372
DMRSTAT table 340
DMRSTSDT table 375
DMRSXDTL table 385
DMRSXSUM table 385
documentation information 13
DPDSPIN DD statement 111
DPJMIGR sample job, table migration 26
DPJSPIN JCL to create spin file 111
DPRARC JCL 101
DPRARCNL JCL 101
DPRDOMRP 37
DPRSMF batch program
   illustration 115
   job control statements 102
DPRSMFR program 101
DPRSTAT program, statistics consolidation JCL 111
DPSUMLD batch program
   definition 25
   description 147
   error messages 142, 152
   illustration 124
   job control statements 149
   load performance data tables procedure 112
   load procedure JCL, SUMMARIZE process 112
   processing control statements 124
   return codes 142, 152
   summary/purge procedure 149
drain claim 187
DRDA remote locations
   in performance data tables 369
DSNUTILB load utility 101
dynamic SQL optimization
   accounting report 188
   statistics report 276
Dynamic SQL/Miniplan by period report 499
Dynamic SQL/Miniplan summary report 500

E

EDM pool
   performance data tables 340
   statistics report 253
error messages
   DPSUMLD program 142, 152
   purge procedure 152
   summarization procedure 152
   table load procedure 142
examples
EXPAND statement/parameter 70
FILTERDATA statement/parameter 71
LINESPP statement/parameter 84
OUTLIM statement/parameter 85
using the EXPAND statement 70
using the FILTERDATA statement 71
using the LINESPP statement 84
using the OUTLIM statement 85
extraction of SMF data
   illustration 115
   job control statements 102

field descriptions
   BDEADLCK, holder 329
   BDEADLCK, waiter 330
   BIOSUM, active log 312
   BIOSUM, archive log 313
   BIOSUM, bootstrap dataset 317
   BIOSUM, buffer pool 314
   BIOSUM, cross invalidation activity 316
   BIOSUM, EDM pool 316
   BIOSUMAR 309
   BIOSUMBS 310
   BIOSUMLG 308
   BIOSUMP 310
   BIOSUMXI 311
   BLKSUMDT 318
   BLKSUMLO 320
   BLKSUMSU 321
   BLKTRCDT 322
   BLKTRCLO, holder/blocker details 323
   BLKTRCLO, victim thread identification 325
   BLKTRCLO, waiter details 326
   BLKTRCSU 324
   BSQSUMPW, exits 332
   BSQSUMPW, highlights 332
   BSQSUMPW, I/O activity 333
   BSQSUMPW, lock suspension activity 334
   BSQSUMPW, scan activity 335
   BSQTRCSW, page/row/LOB/XML locking 336
   BTIMEOUT, causing agent 327
   BTIMEOUT, victim 328
file creation, JCL statements 103
FILTERDATA statement/parameter 71
   report headers from DB2 tables 161
   report names 153
   formatting report headers 171
   FROMDD= processing control statement 127, 129
   FROMMTBL= processing control statement 129, 139

G

   global contention 189
   global DDF activity
   performance data tables 340
   statistics report 258
   global processing control statement
     INVFIELD= 126
     LOG= 126
     NOCOPYPEND= 126
     NOCPYPEND= 126
     PLAN= 126
     SSID= 126
   Greenwich mean time 103
   group buffer pool activity
      accounting report 189
      performance data tables 340, 378
      statistics report 260
   GROUPMETHOD parameter
      syntax 86

H

   headers
      report 161, 171
   highlights, accounting 191

I

   I/O summary detail active log report by DB2 and interval 537
   I/O summary detail archive log report by DB2 and interval 538
   I/O summary detail BSDS report by DB2 and interval 539
   I/O summary detail buffer pool report by DB2 and interval 533
   I/O summary detail cross invalidation activity report by DB2 and interval 540
   I/O summary detail EDM Pool report by DB2 and interval 535
   IBM LOAD method 101
identification in accounting report 215
IFC
   destinations 265
   performance data tables 340
   record count 266
IFCID, optional 31
IFI class 5 times 221
Index Term 82
INVFIELD= processing control statement 126
IO summary report by DB2 531

J
JCL
   OUTLIM parameter 98
JCL samples See BBSAMP 21
job control statements
   batch reporting procedure 166
   DPRSMF program 102
   DPSUMLD program 113, 149
   JXREPT program 166
   purge procedure 149
   SMF data extraction 102
   summarization procedure 149
   table load procedure 113
JXREPT batch program
   customizing reports 164, 170
   illustration 169
   job control statements 166
   reporting procedure 166
   return codes 169
   sample input 170
   specifying report headers 171
   weekly reporting 165
JXRPSQL 166

K
KEEPDICTIONARY control statement 127

L
latch counts, performance data tables 340
load into DB2 tables, DSNUTILB program 113
LOAD methods 101
load procedure, DPSUMLD program 112
LOAD processing control statement
FROMDD= 127
KEEPDICTIONARY= 127
LOG= 127
NOCOPYPEND= 127
REPLACE= 127
SORTKEYS= 127
TABLE= 127
TYPE= 127
TYPE2= 127, 137, 139
TYPE4= 127
lock summary detail report 545
lock summary lockout report 544
lock summary suspensions report 543
lock trace event detail report 549
lock trace lockout report 547
lock trace suspensions report 546
locking
   accounting report 194
   data sharing 245
   performance data tables 340
   statistics report 267
log activity statistics 270
LOG= processing control statement 126, 127
logging 197

M
MAX(DATETIME) 171
mbrnames keyword 166
migration, Performance Reporter tables 26
MIN(DATETIME) 171
miscellaneous section of accounting report 198
multiple summarize and purge processes 147

N
naming conventions 153
negative values in BSTATDR report 49
NOCOPYPEND= processing control statement 126
NOCOPYPEND= processing control statement 126, 127

O
open/close activity 274
optional IFCIDs 31
options
   SYSIN 90
ORDER BY clause 171
order of report, changing 173
outdated data, purging 147
OUTLIM parameter (JCL) 98

P
package
processing 280
reports 163
section in accounting report 198
table 127, 137
page layout 161
parallelism statistics 277
performance data tables
  accounting tables 20, 163
    DMRABDTL table 412
    DMRABSUM table 412
    DMRACTDL table 102, 391
    DMRCASUM table 391
    DMRAPDTL table 424
  summary table creation 147
  accounting tables, DMRAXDTL table 433
  accounting tables, DMRXSUM table 433
  accounting tables, DMRSXDTL table 385
  accounting tables, DMRSXSUM table 385
audit tables
  DMRAUADM table 467
  DMRAUCHG table 456
  DMRAUCMD table 464
  DMRAUDDL table 447
  DMRAUDMB table 453
  DMRAUDML table 450
  DMRAUGRV table 444
  DMRAUSUM table 438
  DMRAUTRC table 470
  DMRAUUTL table 461
  buffer tables, DMRSBFDT table 378
  load procedure 112
statistics tables
  DMRSTAT table 340
Performance Reporter
  definition of 17
  reports 477
performance reports by category 154
plan/package processing 280
PLAN= processing control statement 126, 166
prepared reports 163
printing SMF reports 113
processing control statements
  DPSUMLD program 124
  example 140
publications, related 13
purge procedure
  description 147
  error messages 152
job control statements 149
processing control statements 124
return codes 152
PURGE processing control statement 137

Q
Q3ST subsystem services fields
  in performance data tables 340
  in reports 294
Q8AC Accounting Accelerator fields
  in performance data tables, DMRAXDTL/
  DMRAXSUM 433
Q8ST Statistics Accelerator fields
  in performance data tables, DMRSXDTL/
  DMRSXSUM 385
Q9ST DB2 command data fields
  in performance data tables 340
  in reports 250
QBAC buffer manager fields
  in performance data tables
    DMRABDTL/DMRABSUM 412
    DMRACTDL/DMRCASUM 391
    DMRAPDTL/DMRAPSUM 424
  in reports 180
QBGA buffer manager fields
  in performance data table
    DMRABDTL/DMRABSUM 412
    DMRACTDL/DMRCASUM 391
  in reports 189
QBGL group buffer pool fields
  in performance data tables
    DMRABDTL/DMRABSUM 412
    DMRACTDL/DMRCASUM 391
  in reports 189
QBST buffer manager fields, performance data tables 340, 378
QDST DDF fields
  in performance data table 340
  in reports 258
QIFA IFI accounting fields
QISE EDM pool fields
in performance data tables 340
in reports 253
QISJ Star Join fields
in performance data tables 340
in reports 292
QIST data manager control fields
in reports 273, 284
QJST log manager fields
in performance data tables 340
in reports 270
QLAC DDF fields
in performance data tables 417
QLST DDF fields
in performance data tables 369
QMDA z/OS account code and DDF fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
QPAC general package accounting fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
in performance data tables, DMRAXDTL/DMRAXSUM 433
in reports 198
QSST storage manager fields, performance data tables 340
QT bind data fields
in performance data tables
DMRACDTL/DMRACSUM 391
DMRSTAT/DMRSTSUM 340
QTGA global locking fields
in performance data tables 391
in reports 184
QTGS global locking fields
in performance data tables 340
in reports 245
QTRA authorization check fields
in reports 228
performance data tables 340
QTXA lock data fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
query parallelism 203
QVAS agent services fields, performance data tables 340
QVLS latch manager fields
in performance data tables 340
in reports 266
QWAC accounting record instrumentation fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
in reports 179, 191, 197, 217, 219, 223, 306
QWAX accounting class 3 fields
in performance data tables 391
in reports 223
QWDA data sharing fields
in performance data tables 391
QWHA data sharing fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
DMRSBFDT/DMRSBSUM 378
DMRSTAT/DMRSTSUM 340
DMRSTDF/DMRSDSUM 369
in performance data tables, DMRAXDTL/DMRAXSUM 433
in performance data tables, DMRSXDTL/DMRSXSUM 385
QWHC correlation fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
DMRAXDTL/DMRAXSUM 433
in reports 215, 306
QWHD distributed agent fields
in performance data tables
DMRABDTL/DMRABSUM 412
DMRACDTL/DMRACSUM 391
DMRADDTL/DMRADSUM 417
DMRAPDTL/DMRAPSUM 424
QWSA address space fields
  in performance data tables 340
  in reports 243
QWSB instrumentation destination data,
  performance data tables 340
QWSC instrumentation data fields, performance
  data tables 340
QWSD IFC checkpoint fields
  in performance data tables 340
  in reports 244, 249, 273, 294
QX SQL statement fields
  in performance data tables
    DMRACDTL/DMRACSUM 391
    DMRAPDTL/DMRAPSUM 424
    DMRSTAT/DMRSTSUM 340
QXTA lock activity fields
  in reports 187, 194

R

recommendations
  batch reporting 93
  Data Collector reporting 98
  SQL SELECT statements 171
related publications 13
REPLACE control statement 127
Report Disposition Summary (DOMBRPT1 output) 91
report order, changing 173
reporting procedure
  ad-hoc 165
  customizing reports 164, 170
daily 165
DMRRPT 166
illustration 169
job control statements, JXREPT batch program 166
JXREPT 166
return codes 169
specifying report headers 171
types of data 163
weekly 165
reports
batch reporting recommendations 93
data collector
  sample reports 481
  source data sets 28
DB2 audit reports
  Audited DDL Access 571
  Audited DML Access 572
  AUTHID Change 575
  Authorization Control 570
  Authorization Failures 569
  Detail 577
  DML at BIND 573
  Summary 567
  Utility Access 576
format from DB2 161
from SMF
  I/O field definitions 307
  Locking activity field definitions 318
  printing 113
  statistics field definitions 227
overview 27
recommendations 98
return codes
  batch reporting procedure 169
  DPSUMLD program 152
  JXREPT program 169
  purge procedure 152
  summarization procedure 152
  table load procedure 142
RID list
  accounting report 206
  failures report 527
  statistics report 284
ROW ID 208
ROW ID statistics 285

S

sample data collector reports 481
selecting data sets for data collector reporting 33
services, subsystem 294
single buffer pool, specifying 162
SM100SID, performance data tables 340, 369, 378
SM100SSI, performance data tables 340, 369, 378
SM101SID, performance data tables 385, 391, 412, 433
SM101SSI, performance data tables 385, 391, 412, 433
SMF data extraction
<table>
<thead>
<tr>
<th>illustration 115</th>
<th>subsystem services 294</th>
</tr>
</thead>
<tbody>
<tr>
<td>job control statements 102</td>
<td>summarization procedure</td>
</tr>
<tr>
<td>SMF reports</td>
<td>job control statements 149</td>
</tr>
<tr>
<td>DB2 statistics</td>
<td>load procedure 112</td>
</tr>
<tr>
<td>printing 113</td>
<td>processing control statements 124</td>
</tr>
<tr>
<td>SORT and SORT2 statement/parameter</td>
<td>return codes 152</td>
</tr>
<tr>
<td>syntax 67</td>
<td>summarize rows 147</td>
</tr>
<tr>
<td>SORTKEYS control statement 127</td>
<td>summarization strategy 147</td>
</tr>
<tr>
<td>Source Record Trace (DOMBRPT1 output) 88</td>
<td>SUMMARIZE processing control statement</td>
</tr>
<tr>
<td>specifying report headers 171</td>
<td><strong>COMBINE=</strong> 129</td>
</tr>
<tr>
<td>spin file 111</td>
<td><strong>FROMDD=</strong> 129</td>
</tr>
<tr>
<td>SQL</td>
<td><strong>FROMTBL=</strong> 129</td>
</tr>
<tr>
<td>DCL (accounting) 209</td>
<td><strong>SUMMEND=</strong> 129</td>
</tr>
<tr>
<td>DCL (statistics) 286</td>
<td><strong>SUMMINT=</strong> 129</td>
</tr>
<tr>
<td>DDL (accounting) 211</td>
<td><strong>SUMMKEY=</strong> 129</td>
</tr>
<tr>
<td>DDL (statistics) 288</td>
<td><strong>SUMMSTART=</strong> 129</td>
</tr>
<tr>
<td>DML (accounting) 214</td>
<td><strong>TABLE=</strong> 129</td>
</tr>
<tr>
<td>DML (statistics) 291</td>
<td><strong>TODD=</strong> 129</td>
</tr>
<tr>
<td>optimization 188, 276</td>
<td><strong>TYPE=</strong> 129</td>
</tr>
<tr>
<td>SQL compatibility exception trace by event report 564</td>
<td>summary SQL report by PGM/PKG 555</td>
</tr>
<tr>
<td>SQL create thread index report 563</td>
<td>summary SQL report by PGM/PKG with workloads 556</td>
</tr>
<tr>
<td>SQL long trace report 563</td>
<td>summary/purge procedure, JCL statements 149</td>
</tr>
<tr>
<td>SQL SELECT statements</td>
<td><strong>SUMMEND=</strong> processing control statement 129</td>
</tr>
<tr>
<td>custom reports and charts 164</td>
<td><strong>SUMMINT=</strong> processing control statement 129</td>
</tr>
<tr>
<td><strong>MAX(DATETIME)</strong> 171</td>
<td><strong>SUMMKEY=</strong> processing control statement 129</td>
</tr>
<tr>
<td><strong>MIN(DATETIME)</strong> 171</td>
<td><strong>SUMMSTART=</strong> processing control statement 129</td>
</tr>
<tr>
<td><strong>ORDER BY clause</strong> 171</td>
<td>suspensions, class 3</td>
</tr>
<tr>
<td>recommendations 171</td>
<td>accounting report 223</td>
</tr>
<tr>
<td>SUMMEND= processing control statement</td>
<td>syntax</td>
</tr>
<tr>
<td>SUMMINT= processing control statement</td>
<td>rules for timezone adjustment process 103</td>
</tr>
<tr>
<td>SUMMKEY= processing control statement</td>
<td>syntax diagrams</td>
</tr>
<tr>
<td>SUMMSTART= processing control statement</td>
<td><strong>GROUPMETHOD</strong> parameter 86</td>
</tr>
<tr>
<td>TABLE= processing control statement</td>
<td><strong>SORT</strong> statement/parameter 67</td>
</tr>
<tr>
<td>TODD= processing control statement</td>
<td>syntax statement conventions 14</td>
</tr>
<tr>
<td><strong>TYPE=</strong> processing control statement</td>
<td><strong>APPPROF</strong> 88</td>
</tr>
<tr>
<td>summary/purge procedure, JCL statements 149</td>
<td>data collector reports 40</td>
</tr>
<tr>
<td>summary/purge procedure, JCL statements 149</td>
<td><strong>DB2LOAD</strong> 88</td>
</tr>
<tr>
<td>SUMMEND= processing control statement 129</td>
<td>SYSIN options 90</td>
</tr>
<tr>
<td>SUMMINT= processing control statement 129</td>
<td><strong>SYSIN</strong> 90</td>
</tr>
<tr>
<td>SUMMKEY= processing control statement 129</td>
<td><strong>TRACEIN</strong> 90</td>
</tr>
<tr>
<td>SUMMSTART= processing control statement 129</td>
<td><strong>TRACEWRK</strong> 91</td>
</tr>
<tr>
<td>suspensions, class 3</td>
<td><strong>SYSTEMID</strong> 171</td>
</tr>
<tr>
<td>accounting report 223</td>
<td><strong>SUBSYSTEM</strong> 171</td>
</tr>
<tr>
<td>syntax</td>
<td><strong>rules for timezone adjustment process</strong> 103</td>
</tr>
<tr>
<td>rules for timezone adjustment process 103</td>
<td>syntax diagrams</td>
</tr>
<tr>
<td>GROUPMETHOD parameter 86</td>
<td><strong>SORT</strong> statement/parameter 67</td>
</tr>
<tr>
<td>syntax statement conventions 14</td>
<td><strong>APPPROF</strong> 88</td>
</tr>
<tr>
<td>data collector reports 40</td>
<td><strong>DB2LOAD</strong> 88</td>
</tr>
<tr>
<td>SYSIN options 90</td>
<td><strong>SYSIN</strong> 90</td>
</tr>
<tr>
<td><strong>SYSIN</strong> 90</td>
<td><strong>TRACEIN</strong> 90</td>
</tr>
<tr>
<td><strong>TRACEWRK</strong> 91</td>
<td><strong>SYSTEMID</strong> 171</td>
</tr>
<tr>
<td><strong>SUBSYSTEM</strong> 171</td>
<td><strong>rules for timezone adjustment process</strong> 103</td>
</tr>
</tbody>
</table>
T

table load program  error messages 142
    illustration 124
    job control statements 113
    return codes 142

table names, changing 26

table update, DPRSMF 101

TABLE= processing control statement  127, 129

TCCSID, changing code page 103

Thread accounting package summary report 497

Thread detail by AUTHID report 499

thread SQL trace report by occurrence—event
    timestamp 561

thread SQL trace report by occurrence—event
    timestamp—with workloads 562

thread SQL trace summary report by PGM/PKG 557

thread SQL trace summary report by PGM/PKG
    and statement number 559

thread SQL trace summary report by PGM/PKG
    and statement number with workloads 560

thread SQL trace summary report by PGM/PKG
    with workloads 558

Thread summary by interval report 499

THSQLDYN report 499

THSQLDYS report 500

time interval, changing for statistics reports 172

times

    class 1 application time 217
    class 1 elapsed time distribution 216
    class 2 DB2 time 219
    class 2 time distribution 217
    class 3 suspensions
        accounting report 223
        in performance data table 391
    class 5 IFI time 221

    CPU 243

timezone adjustment process 103

TIMEZONE= 103

TODD= processing control statement

    SUMMARIZE 129

    UNLOAD 139

TRACEIN (DOMBRPT1 output) 90

TRACEWRK (DOMBRPT1 output) 91

U

UDF (user defined functions) 227

UNLDEND control statement 139

UNLDSTART control statement 139

UNLOAD processing control statement 139

user defined functions 227

V

virtual storage

    pool details 298

    shared and common 299

    shared and common storage summary 299

    statement cache and XPROC detail 301

    statement statistics 302

    thread information 304

Virtual storage status report 522–525

Virtual storage status summary report 527

W

WAR (write register requests) statistics 305

weekly reporting, JXREPT batch program 165

write register requests (WAR) statistics 305