BMC Software is releasing version 10.1.00 of the BMC System Performance for DB2® solution.

This solution includes the following components:

- MainView for DB2
- Pool Advisor for DB2
- OPERTUNE for DB2
- CATALOG MANAGER for DB2 Browse

**NOTE**

Before you begin installation, BMC recommends that you check the Customer Support website at [http://www.bmc.com/support](http://www.bmc.com/support) for:

- updated product documentation (for example, flashes and technical bulletins)
- product downloads, patches, and fixes (PTFs)
- product availability and compatibility (PAC) data

These release notes supplement and supersede the product documentation and discuss product enhancements:

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What’s new

These topics describe the changes or new features in this release.

System Performance for DB2

This version of System Performance for DB2 supports the IBM® DB2 Version 10 subsystem.

New infrastructure components

This release includes the following new infrastructure components:

- **DB2 Component Services (DBC)** replaces the Common Data Collector (CDC) authorized subsystem that earlier releases used.
- The **Next Generation Logger (NGL)** replaces the high-speed writer for the CDC.
- The new **DB2 Product Configuration** component sets product options and stores them in XML-formatted option sets.

**DB2 Component Services (DBC)**

The DBC technology provides a persistent z/OS® subsystem address space into which BMC products can dynamically initialize their own product services. The DBC subsystem is a long-running-service address space that remains active for the life of an IPL.

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**NOTE**

Although BMC does not recommend starting the DBC subsystem as a batch job, you can run the DBC as a batch job on a temporary basis.
**DBC benefits**

The new DBC technology provides the following benefits over the previously used CDC:

- exploits 64-bit storage
- accommodates IBM System z® Integrated Information Processors (zIIPs)
- avoids ASN reuse issues
- uses XML-based initialization
- is API driven (build independent)
- supports dynamic product registration and installation
- facilitates concurrent use by many products
- allows recycling products without recycling the subsystem

**CDC-based commands**

Most of the CDC operator commands from earlier releases remain as default subsystem commands in the DBC. To support the old commands, the Data Collector ID (CDC SSID) must be the same as the DBC SSID. Also, BMC recommends using a DBC group name that matches the DOMPLEX group name for your performance products.

The CDC commands are now bundled in a shared component called the *BMC Common Infrastructure* or *DOM Agent* (FMID ZDOMA10). This shared component runs as an agent under the DBC.

**CDC-related installation issue**

If you are migrating from an earlier release of a performance product, an incompatibility affects the subsystem control blocks if the following conditions exist:

- You are migrating from an earlier release of the CDC subsystem to a version 10.1 DBC subsystem.
- Since the last IPL, the CDC subsystem has been started and has used the SSID.

In this situation, you can resolve the incompatibility as follows:

1. Shut down the CDC.
2. Run an SSID migration job (SAMPLIB member #SSIDMIG provides a sample) that converts the SSID for use by the DBC.
3. Start the DBC.
If you subsequently decide that you want to resume running the CDC with the same SSID, you can do so as follows:

1. Shut down the DBC.

2. Run a fallback job (see the sample in #SSIDMIG) to convert the SSID for use by the CDC.

3. Restart the CDC.

**NOTE**
No incompatibility exists if you are using a new SSID to install a test DBC, or if you have not started the CDC and used the current SSID since the last IPL.

### Next Generation Logger (NGL)

The Next Generation Logger (NGL) logs and retrieves data based on application-defined keys and a time span. Running as a service within the DBC subsystem, NGL relies on the Runtime Component System (RTCS) for registry services.

A DBC subsystem can support one or more instances of NGL. Each instance can support multiple LOGSETs, which are groups of z/OS linear data sets (or log files) in which NGL stores data records. (LOGSETs are comparable to trace data sets in earlier releases.) Various BMC mainframe products use NGL LOGSETs for their logging requirements.

**NGL benefits**

The new NGL component provides the following benefits over the previously used high-speed writer for the CDC:

- allows multiple products to use the service
- simplifies setup and deployment

For example, in earlier releases, you had to define and allocate trace data sets manually. In contrast, NGL automatically allocates log files in the LOGSETs based on user-defined parameters. You can control the number of log files allocated and their sizes, and you can use parameters to set goals for online data access (in days or hours).
offers substantial improvements for indexing:

— Because the data and indexes are co-resident, separate RBAT index data sets are no longer needed.
— Unplanned outages no longer require index rebuilds on subsequent startup.
— Products can define indexes as needed to optimize subsequent retrieval.

offers a faster and more robust archiving system

When a LOGSET fills, you have the option of saving its data in an external archive data set. The NGL creates a DBC-managed started procedure called a process to store the data (like the DOMBCOPY batch job used in previous releases, but much faster). You can use control parameters to set the number of archives to retain, how long to retain them, the maximum amount of DASD space to use, and so on. The NGL uses the same archive directory data set (COPYDIR) that earlier releases used.

NOTE

You can create a batch job to post-process archives as they are created. To do so, save the JCL in a member of the DOMPARMS or DCCPARM PDS in the DBC proc. Specify that member name in the archive member name field of the LOGSET definition. In response, the archive process submits the job after creating the archive file.

Tips on setting up output groups

Like earlier releases, this release organizes history data into output groups. Each output group defines the kind of data to store and the control parameters to use for NGL. Defining an output group creates an associated LOGSET named ssidLnnn, where ssid is the DOM ID and DBC SSID, and nnn is the output group’s number.

If you use LOGSET archiving, avoid allocating particularly small log files for the LOGSET. By balancing the number of log files and log file size, you can avoid excessive switch and archive processes. For example, allocating 40 20-MB log files would cause too many switch and archive processes, and allocating 8 100-MB log files would perform more efficiently than 2 400-MB files.

Also, consider using different output groups for different types of data. Writing data from some BMC products (in particular, the BMC APPTUNE product during unload processing) can proceed slowly to protect against data loss. In contrast, data written by DB2 proceeds at the normal rate. For maximum efficiency, you should segregate the BMC and DB2 data into separate output groups (LOGSETs). For example, separate APPTUNE interval accounting data from the SQL text, error, and exception data.
**New infrastructure components**

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**DB2 Product Configuration component**

The DB2 Product Configuration component is hosted by the DBC and sets options for the products. DB2 Product Configuration replaces the Installation Assistant from earlier releases and the administration functions for editing DOMPLEX profiles and APPTUNE filters. Because the DB2 Product Configuration dialog lets you expand and collapse interface items, you can scroll through all of the configuration options on a single screen.

This component provides the following additional benefits:

- stores product options in XML-formatted option sets to accommodate cloning, sharing, and transporting
- supports batch deployment to different systems
- provides a generic editor for standardization across multiple products

The configuration data is kept in a DOMPLEX option set. The data is stored in XML format in a z/OS Distributed File Service zSeries® File System (zFS) structure called a DATASTORE. You can use batch utilities to import or export these option sets. You can also clone, tailor, and propagate them to other systems as simple sequential files.

**NOTE**

You must define the zFS file system and mount it to z/OS during installation, which requires adequate zFS file system authority.

When running the performance products (and their DBC subsystems) on multiple LPARs of a SYSPLEX, you do not need a separate DB2 Product Configuration agent and DATASTORE on each DBC instance. Instead, you can set up a single designated server, and your performance products on other LPARs can use that server to obtain options. Thus, you can change options in one place for multiple products, removing the need to keep multiple copies in sync.
These topics describe the changes or new features in this release of MainView for DB2.

**DB2 version 10 support**

- The new DB2 version 10 statistics and accounting fields have been added to the
  - appropriate status, buffer pool, EDM pool, and storage views
  - trace accounting displays
  - batch reports
  - Performance Reporter tables

- The ZPARM index and views include the new DB2 version 10 ZPARMS.

- The page set views (PS*) now display I/O statistics for DB2 8, 9, and 10.

- The new STZOSM and STZOSMD views display IBM z/OS® CPU and storage utilization metrics for DB2 9 and 10. The views display data only if the ZPARM parameter ZOSMETRICS is enabled and the Resource Measurement Facility (RMF) API or the CMF Monitor API is active. Otherwise, some fields display n/a.

- The new STROW and STROWD views display statistics for row activity for DB2 8, 9, and 10; and literal replacement counts for DB2 10. The views can help you measure the impact of performance enhancements such as multirow FETCH and INSERT statements at the DB2 subsystem level.

- The STEDMPD view now supports the new storage reporting of thread related objects below and above the bar for DB2 10.

- The work file views, STWKTMP and STWKTPAD, now display information about in-memory work files used by SORT and Data Manager, and display the new 64-bit workfile storage sizes in kilobytes for DB2 10.

- The status and buffer pool views now support the new 64-bit buffer pool and GBP counts for DB2 10. The new BFRPLXD and GBPACTD views display pool details for DB2 10. The new BFRPLDZ and BFGPADZ views display detail summary information for a DB2 10 subsystem.

- The DB2STORD view displays storage values for the distributed address space in the new DIST column for DB2 10.

- Various dynamic SQL cache views (SCX*) now support the 64-bit counters and the five new wait counts for DB2 10. The new wait counts affect accounting in various places, such as the DUSER and thread history views and the Performance Reporter reports.

- The restricted objects views, OBJLIST and OBJDETL, now display the AREOR Advisory REORG-pending status that was introduced in DB2 10.
- A new batch report, BSTATSTX, shows DB2 virtual storage usage for DB2 10 subsystems.

- The views and displays, DUSER, STRAC, TSTAT, TRLTRAC, and various thread interval and thread query views, now display waits due to latch contention for DB2 10.

- The DUSER view and full-screen displays, DUSER and STRAC, include package roll-up data for DB2 10. The first 24 package entries are correlated by location name, collection ID, program name, and consistency token.

- The DUSER view and full-screen display and the STRAC and TSTAT full-screen displays include Concentrate Statements With Literals accounting fields in the Dynamic Statement Cache Counts section.

**Navigation and usability**

- Monitor administration and data views are now available in windows mode. For more information, see “Monitor improvements” on page 10.

- The trace administration and data views are now available in windows mode. These views were previously available in MainView for DB2 9.2 by applying SPE PTFs and enabling the enhancement. For more information, see “Trace improvements” on page 11.

- Hyperlinks to Explain information for a SQL statement are now invoked in windows mode, providing the full panel interface for Explain options as provided previously in MVDB2/DC panels. For more information, see “Explain improvements” on page 12.

- The information about DB2 exceptions provided by the DB2EX analyzer full-screen service is now available in a new view, STEXC. STEXC shows background sampler system exceptions, thread exceptions, and outstanding messages for monitors in warning status. Hyperlinks to the DMWARN and STWARN views, and the new view, STMONEX, provide detailed exception information.

- New workload history charts provide a graphical interface to explore both workload trends and exceptions. For more information, see “MainView Explorer charts” on page 9.

The new workload history charts and the enhancements to windows mode functionality listed above improve the usability of MainView for DB2 within the MainView Explorer graphical user interface.
MainView Explorer charts

MainView for DB2 10.1 provides several new graphical charts for historical workload data in MainView Explorer. You can access the charts in the new Configurations node under the EZExplorer node. By using the charts, you can easily identify anomalies in normal workload patterns and quickly drill down to additional information about that time period. There are two sources of workload history information:

- Workload objectives monitors, which track response time and goals for all of the defined workloads. These workloads include several distributed workloads by connection type. User-defined workloads can monitor critical applications for service level agreement (SLA) analysis.

- Thread history data, summarized in one-minute intervals by connect type. Charts show thread processing and CPU times, activity rates for SQL and I/O, and exceptions. Hyperlink access to the detail thread data per interval enables the identification and analysis of problem threads.

For information about using the new charts, see the MainView for DB2 Getting Started Guide. For information about MainView Explorer, see the MainView User Guide.

Thread history improvements

- The HTLOGS view Number Intvls hyperlink to the Thread Interval History Summary view (HTDTLZ) has been removed. Navigation to HTDTLZ and similar thread interval summaries is now provided in the Thread History dialogs which are accessed from the HTIQZ view (Number Records hyperlink). This access is valid for both trace log data sets (TLDS) and MainView for DB2 - Data Collector active trace data sets. The previous views were preserved in MainView for DB2 9.2 only for cross-release compatibility with MVDB2 9.1 and are no longer needed.

- The HTIQZ view has a new hyperlink for trace log data sets, TLDS All Recs, that shows all of the thread accounting records from the selected TLDS in the TRLTRAC view. This hyperlink is especially useful for exception traces, where only occasional threads are captured and might be in widely spaced 15-minute intervals.

- The thread query panel (available from the HTIQZ view) provides the following new query filters:
  - Role
  - XML Storage Used (DB2 9.1 and later)
  - Latch Contention Wait (DB2 10)
  - zIIP Total CPU
  - zIIP in-DB2 CPU
  - zIIP-eligible CPU on CP

These fields are now included in various views.
The following thread query filters can now be specified for both TLDSs and MainView for DB2 - Data Collector trace data sets. Previously, these filters were not available for TLDSs:

— End User Name
— End User Workstation
— End User Transaction/Application

**Restricted objects and page set improvements**

- The restricted objects view, OBJLIST, now uses partition ranges to consolidate contiguously numbered partitions that have identical restricted or advisory conditions into one row of output (rather than one row per individual partition). This change improves the usability, resource usage, and performance of the view.

- Additional changes to restricted objects processing have significantly improved the performance of the page set view PSSTAT—which performs a join operation to restricted objects—when processing a very large number of rows.

These improvements are also available in MainView for DB2 version 9.2 by applying PTF BPD3394.

**Monitor improvements**

- The following new monitor administration views are available:

  — The MONACTV (or AT) view can be used to display active monitors; modify, replicate, stop, and purge a monitor; display a plot view of the data collected by a monitor; access a monitor request summary; access a monitor warning summary; and access the journal log display. The view is allowed only in target mode.

  — The MONSERV (or SM) view can be used to used to start, lock, and unlock a monitor; access a dialog to issue SET service requests; and access the journal log display.

  — The MONSUMM view displays active monitors and provides hyperlinks to display monitors that have a status of completed, invalid, quiesced, or in warning.

  — The MONWARN view displays monitors that have a status of in warning.

- The new XMLMX monitor reports the maximum storage used for XML values (for DB2 9.1 and later). The monitor results are displayed in the new plot view DXMLMX.
Trace improvements

- The following new views are available to start, stop, and manage traces; view trace data; and manage trace logs:
  - The Current Traces view (CT) displays current application traces that are active or complete. The CT view is allowed only in target mode.
  - The History Traces view (HT) displays historical trace log data sets (TLDS) in the trace directory for DB2, IMS\textsuperscript{TM}, and CICS\textsuperscript{\textregistered} systems. The HT view is allowed in both target mode and SSI mode; however, the context affects the view content and hyperlinks, as described in the online Help and the MainView for DB2 User Guide.

The trace administration views were previously made available in MainView for DB2 version 9.2 through PTFs, but had to be enabled manually.

- The windows mode Start Trace (ST) dialog, available from the CT view, supports lowercase values for trace qualifiers such as Correlation ID (DB2CORR). Lowercase values are not supported in the full-screen trace panels.
- The TRLTRAC and TRSTRAC views include several new zIIP usage fields.
- The trace thread list view, TRLTRAC, has a new Role hyperlink that displays a list of summarized threads sorted by role name in the new view, TRROLEZ.
- Trace data can now be filtered by DB2 role by using the new DB2ROLE keyword on the DB2 Trace Selection Criteria panel.
For DB2 10, the DTRAC display event pop-ups displays have been updated as follows:

— New Enhanced SQL Statement Monitoring information is displayed.

— The LOCK TIMEOUT event pop-up display indicates the SQL statement type as static or dynamic for lock waiters and holders.

— The CLOSE event pop-up display indicates the CLOSE TYPE and includes SQL accounting statistics (IFCID 58).

— The SQL-TEXT event pop-up display includes SQL statement type information (IFCID 63).

— The OPEN event pop-up display indicates whether the implicit commit cursor attribute is specified (IFCID 65).

— The AUTH-FAIL* event pop-up display indicates the following new authorization failure types (IFCID 140):
  
  - CHECK DATA UTILITY
  - CREATE SEC OBJ
  - DROP TABLE EXEMPT
  - EXPLAIN
  - EXPLAIN MONITOR
  - QUERY TUNING
  - READ
  - SECADM
  - SQLADM
  - SYSOPR, SYSCTRL, ...
  - TRUNCATE EXEMPTION
  - UTILITY EXEMPTION
  - WRITE

For DB2 10, the STRAC display CLOSE event pop-up display includes SQL accounting statistics (IFCID 58) provided by Enhanced SQL Statement Monitoring.

**Explain improvements**

— The Explain feature is now available in MainView Explorer.

— The following views now hyperlink to the new EXPLAIN view instead of the Data Collector reports (TIACSQLX and TIACSQL8):

<table>
<thead>
<tr>
<th>View name</th>
<th>Hyperlink field to EXPLAIN view</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASUTIME</td>
<td>CACHE ID</td>
</tr>
<tr>
<td>SCSQLD</td>
<td>Statement ID</td>
</tr>
<tr>
<td>SCXSQLD</td>
<td></td>
</tr>
</tbody>
</table>
Explain response time is faster because you no longer invoke a Report Manager session to access Explain information.

Catalog Manager access

The EZDB2 and EZDBA menus CATALOG MANAGER-Remote field now hyperlinks to the new DDFCATMZ view, where you can hyperlink on the Remote Location field and browse objects in the remote DB2 catalog.

Performance Reporter

Two new Performance Reporter tables, DMRSTADT and DMRSTSDT, provide system storage statistics from IFCID 225. To extract SMF data to load into these tables, the DPRDSMF program supports a new DPRCNTL DD statement parameter, TYPE3. For more information about these tables, see the MainView for DB2 Performance Reporter User Guide.

Several Performance Reporter tables contain fields that are defined with a data type of bigint. Support for the bigint data type was introduced in DB2 9. Therefore, the Performance Reporter tables must be defined on DB2 9 or later. (If you use Performance Reporter tables on DB2 8, you will have to continue using MainView for DB2 version 9.2 or earlier Performance Reporter processing jobs and reporting.)

As stated in previous MainView for DB2 release notes and books, the DPREPORT program and the reports that it generated from SMF were functionally stabilized in MVDB2 version 9.1. The program and reports have been removed from MainView for DB2 version 10.1. The MainView for DB2 - Data Collector batch reports should be used instead of the DPREPORT program and reports. The MainView for DB2 - Data Collector batch reports have been enhanced to provide user specified summarization and qualification by different identifiers, as described in the following section.

MainView for DB2 - Data Collector reports

The new Virtual Storage Status report (BSTATSTX) is available for DB2 10 and is comparable to the BSTATSTM report available for DB2 9 and earlier.
The BACCT* reports now include information about latch waits and SQL DDL.

The BSTAT* reports now include information about SQL DML, DDL, and DDF, and EDM pool storage.

The Next Generation Logger (NGL) archive utility replaces the DOMBCOPY utility. BBSAMP JCL members have been updated accordingly.

The Data Collector batch report utility, DOMBRPT1, has the following new summarization and qualification parameters:

— The QUALIFIER statement now supports ROLE, CORRNAME (correlation name), and CONTYPE (connection type) for some reports.

— The GROUPBY parameter defines primary and secondary grouping criteria for summary reports.

— The SCOPE parameter controls how summary reports are grouped into report sections when the GROUPBY parameter is specified.

— The BUFDTL parameter controls the level of detail for all buffer pool and global buffer pool reporting.

For more information about the new parameters, see the MainView for DB2 Performance Reporter User Guide.

The report BACCPLSR (Accounting Summary by Plan) is no longer distributed. An equivalent report can be obtained by running the BACCTSR report with the new GROUPBY parameter as follows:

REPORT (NAME (BACCTSR) GROUPBY(PLAN))

Pool Advisor for DB2

This version of Pool Advisor for DB2 supports IBM DB2 Version 10.

OPERTUNE for DB2

These topics describe the changes or new features in this release of OPERTUNE for DB2.

Support for DB2 Version 10

This version of OPERTUNE for DB2 supports DB2 Version 10.
New ZPARM parameters

This version of OPERTUNE includes the following new ZPARM parameters:

SECADM IDs

The following SECADM ID parameters are new:

- Security SECADM ID-1
- Security SECADM Type-1
- Security SECADM Style-1
- Security SECADM ID-2
- Security SECADM Type-2
- Security SECADM Style-2

Security SECADM ID-1

This parameter indicates the primary DB2 security administrator. Specify one of the following values:

- An authorization ID of 1 through 8 characters (if SECADM1_TYPE=AUTHID).
- An ordinary SQL identifier of 1 through 128 characters, not beginning with SYS and not equal to ACCESSCTRL, DATAACCESS, DBADM, DBCTRL, DBMAINT, NONE, NULL, PACKADM, PUBLIC, SECADM or SQLADM (if SECADM1_TYPE=ROLE and SECADM1_INPUT_STYLE=CHAR).
- A string of 1 through 128 hexadecimal characters (2 through 256 single-byte characters: 0 through 9 and A through F) that represents a Unicode-encoded SQL identifier (if SECADM1_TYPE=ROLE and SECADM1_INPUT_STYLE=HEX).

Security SECADM Type-1

This parameter indicates whether SECADM1 is a role or an authorization ID. Valid settings are ROLE and AUTHID. The default is AUTHID.

Security SECADM Style-1

This parameter specifies whether the SECADM1 setting is passed as a hexadecimal string or as a standard character string. Valid values are HEX or CHAR. A value of HEX means that SECADM1 is a hexadecimal character string that represents a Unicode-encoded role name. A value of HEX is valid only when SECADM1_TYPE=ROLE. When SECADM1_INPUT_STYLE is set to HEX, SECADM1 must be an even number of bytes, 2 through 256, consisting entirely of 0 through 9 and A through F.
The default value for SECADM1_INPUT_STYLE is CHAR, which means that SECADM1 is passed as a standard character string. If SECADM1_TYPE=AUTHID, SECADM1 can be an authorization ID of 1 through 8 characters, or if SECADM1_TYPE=ROLE, SECADM1 can be an ordinary SQL identifier of 1 through 128 characters.

**Security SECADM ID-2**

This parameter indicates the secondary DB2 security administrator. Specify one of the following:

- An authorization ID of 1 through 8 characters (if SECADM2_TYPE=AUTHID).
- An ordinary SQL identifier of 1 through 128 characters, not beginning with 'SYS' and not equal to ACCESSCTRL, DATAACCESS, DBADM, DBCTRL, DBMAINT, NONE, NULL, PACKADM, PUBLIC, SECADM or SQLADM (if SECADM2_TYPE=ROLE and SECADM2_INPUT_STYLE=CHAR).
- A string of 1 through 128 hexadecimal characters (2 through 256 single-byte characters: 0 through 9 and A through F) that represents a Unicode-encoded SQL identifier (if SECADM2_TYPE=ROLE and SECADM2_INPUT_STYLE=HEX).

The default is SECADM.

**Security SECADM Type-2**

This parameter indicates whether SECADM2 is a role or an authorization ID. Valid settings are ROLE and AUTHID. The default is AUTHID.

**Security SECADM Style-2**

This parameter specifies whether the SECADM2 setting is passed as a hexadecimal string or as a standard character string. Valid values are HEX or CHAR. A value of HEX means that SECADM2 is a hexadecimal character string that represents a Unicode-encoded role name. A value of HEX is valid only when SECADM2_TYPE=ROLE. When SECADM2_INPUT_STYLE is set to HEX, SECADM2 must be an even number of bytes, 2 through 256, consisting entirely of 0 through 9 and A through F.

The default value for SECADM2_INPUT_STYLE is CHAR, which means that SECADM2 is passed as a standard character string. If SECADM2_TYPE=AUTHID, SECADM2 can be an authorization ID of 1 through 8 characters. If SECADM2_TYPE=ROLE, SECADM2 can be an ordinary SQL identifier of 1 through 128 characters.

**SMF Record Compression Value**

Use this parameter to indicate whether DB2 is to compress trace records that are destined for SMF. Specify one of the following:
*OFF*
SMF data is not compressed. Off is the default.

*ON*
All SMF data after the SMF header (SM100END, SM101END, or SM102END) will be compressed with the z/OS compression service CSRCESRV. A compressed record will be identified by a bit in the SMF100, 101, and 102 headers. The trade-off for this function will be SMF volume versus an increase in CPU to compress and expand records.

**Use SORTNUM Elimination Logic**

DB2 utilities have been enhanced to allocate sort work data sets dynamically before invoking DFSORT if UTSORTAL is set to YES and no SORTNUM value is specified in the utility statement. The SORTNUM value will be ignored. Valid settings are YES and NO. The default is YES for DB2 10. The default is NO for DB2 8 and 9.

**DB2 Standard Balance**

DB2 APAR PK61277 added support in the DB2 9 optimizer for an improved formula for balancing the costs of input/output and CPU speeds. APAR PK75643 causes the optimizer to choose access paths that more accurately reflect recent improvements in System z processor speeds.

Use of the formula is controlled by the DB2 subsystem parameter OPTIOWGT, which can be set to DISABLE or ENABLE. The default is DISABLE, meaning that the optimizer uses the traditional cost balance formula.

APAR PK75643 changes the default setting of OPTIOWGT from DISABLE to ENABLE so that DB2 access path selection can more accurately reflect faster CPU System z processor speeds.

IBM recommends that all current DB2 Version 9.1 for z/OS customers who use OPTIOWGT=DISABLE now convert to OPTIOWGT=ENABLE. See the ++HOLD actions for instructions with APAR PK75643.

**Management Scope**

This parameter indicates whether the PLANMGMT setting applies to static SQL, dynamic SQL, or both. This parameter is meaningful only when PLANMGMT is not set to OFF. Specify one of the following values:

*ALL*
Include both static and dynamic SQL queries.

*STATIC*
Include only static queries. STATIC is the default.
- DYNAMIC
  Include only dynamic queries.

**Random Group Attach Indicator**

Random attach controls member selection logic when group attach is used (attach to group SSID rather than member). Specify one of the following values:

- Y
  YES. This member may be selected at random to satisfy the group attach request. The default is YES.

- N
  NO. This member will not be used unless none of the members with RANDOMATT=YES are available. To obtain version 8 member selection logic, specify RANDOMATT=NO for all members of the group.

**Revoke Dependent Privileges**

Specify whether revoking a privilege or an authority from a user should include any dependent privileges. Specify one of the following values:

- SQLSTMT
  This parameter indicates that including dependent privileges during revoke is controlled at the SQL level as specified in the REVOKE statement. That is, DB2 honors the (NOT) INCLUDING DEPENDENT PRIVILEGES clause of the SQL REVOKE statement. SQLSTMT is the default setting.

- YES
  All revokes will include dependent privileges, except ACCESSCTRL, DATAACCESS, and system DBADM. An error is returned if the REVOKE statement specifies the NOT INCLUDING DEPENDENT PRIVILEGES clause, except for revoke ACCESSCTRL, DATAACCESS, and system DBADM authorities.

- NO
  Revokes will not include dependent privileges. An error is returned if the REVOKE statement specifies the INCLUDING DEPENDENT PRIVILEGES clause.

**Set CHKP for inconsistent objects**

This parameter indicates whether the CHECK DATA and CHECK LOB utilities should place inconsistent objects in CHECK PENDING status. When these utilities detect an inconsistency in an object, they write a diagnostic message and end with return code 4. Specify one of the following values:

- YES
  The object will be placed in CHECK PENDING status.
The object will not be placed in CHECK PENDING status. Objects that are already in CHECK PENDING status will remain in that status. NO is the default.

**SMS Dataclass Name for catalog files**

This parameter indicates the SMS data class, if any, for DB2 catalog and directory data sets. The default is null; otherwise specify a valid SMS class name from 1 to 8 characters. Enter NONE to clear the SMS Dataclass Name.

**SMS MGMT Class Name For Catalog Files**

This parameter indicates the SMS management class, if any, for DB2 catalog and directory data sets. The default is null, otherwise specify a valid SMS class name from 1 to 8 characters. Enter NONE to clear the SMS MGMT Class Name.

**SMS Dataclass Name for catalog indexes**

This parameter indicates the SMS data class, if any, for DB2 catalog and directory index data sets. The default is null, otherwise specify a valid SMS class name from 1 to 8 characters. Enter NONE to clear the SMS Dataclass Name.

**SMS MGMT Class Name for catalog indexes**

This parameter indicates the SMS management class, if any, for DB2 catalog and directory index data sets. The default is null, otherwise specify a valid SMS class name from 1 to 8 characters. Enter NONE to clear the SMS MGMT Class Name.

**SMS STOR Class Name for catalog indexes**

This parameter indicates the SMS storage class, if any, for DB2 catalog and directory index data sets. The default is null, otherwise specify a valid SMS class name from 1 to 8 characters. Enter NONE to clear the SMS STOR Class Name.

**Default Checkpoint Type parameters**

You can specify the following Default Checkpoint Type parameters:

- **Type**
- **Records**
- **Minutes**
- **Frequency**

**Type**
This parameter indicates whether checkpoints will be taken based on the number of log records written, the time between checkpoints, or both.

SINGLE
DB2 will perform log checkpoints according to either the number of log records written or the number of minutes elapsed, as specified by the CHKFREQ parameter. The CHKLOGR and CHKMINS parameters must both be set to NOTUSED. This is the default setting.

BOTH
DB2 will perform log checkpoints autonomically according to both the number of log records specified by the CHKLOGR parameter and the number of minutes specified by CHKMINS parameter. The CHKFREQ parameter must be set to NOTUSED.

Records
When CHKTYPE is SINGLE, CHKLOGR is not meaningful and must be set to NOTUSED. This is the default setting.

When CHKTYPE is BOTH, CHKLOGR specifies the number of log records written between checkpoints, and must be an integer from 1000 to 99999999.

Minutes
When CHKTYPE is SINGLE, CHKMINS is not meaningful and must be set to NOTUSED. This is the default setting.

When CHKTYPE is BOTH, CHKMINS specifies the number of minutes between log checkpoints, and must be an integer from 1 through 1439.

Frequency
This parameter specifies the number of log records that DB2 writes before a checkpoint is written. The default is 50,000 which causes DB2 to write a checkpoint every time 50,000 log records have been written. You can specify the system checkpoint frequency in minutes or in number of log records. If you have widely variable logging rates, maximize system performance by specifying the checkpoint frequency in time. DB2 starts a new checkpoint at the interval you specify, either in minutes, or in the number of log records.

The SET LOG command can be used to dynamically change the number of log records between checkpoints.

If your primary concern is DB2 restart time, use a checkpoint frequency between 50 000 and 1 000 000 log records. Otherwise, use a checkpoint frequency of 2 to 5 minutes.
Compress SPT01 Directory

This parameter indicates whether the SPT01 directory space should be compressed. Valid settings are NO and YES. The default is NO.

Use Flashcopy for Copy

This parameter indicates whether the COPY utility will use the system parameter settings for FLASHCOPY and FCCOPYDDN when those keywords are not present in the utility control statement. Valid values are NO and YES. The default is NO.

Use Flashcopy for Load

This parameter indicates whether the LOAD utility will use the system parameter settings for FLASHCOPY and FCCOPYDDN when those keywords are not present in the utility control statement. Valid values are NO and YES. The default is NO.

Use Flashcopy for Rebuild Index

This parameter indicates whether the REBUILD INDEX utility will use the system parameter settings for FLASHCOPY and FCCOPYDDN when those keywords are not present in the utility control statement. Valid values are NO and YES. The default is NO.

Use Flashcopy for Reorg Index

This parameter indicates whether the REORG INDEX utility will use the system parameter settings for FLASHCOPY and FCCOPYDDN when those keywords are not present in the utility control statement. Valid values are NO and YES. The default is NO.

Use Flashcopy for Reorg TBL SPC

This parameter indicates whether the REORG TABLESPACE utility will use the system parameter settings for FLASHCOPY and FCCOPYDDN when those keywords are not present in the utility control statement. Valid values are NO and YES. The default is NO.

Enable Honor KEEPDICTIONARY

This parameter specifies whether DB2 should honor or ignore the KEEPDICTIONARY parameter on LOAD REPLACE. Y indicates DB2 should honor the KEEPDICTIONARY parameter. This is a DB2 version 9 only ZPARM.
**Maximum DSSIZE**

This parameter indicates the maximum dssize in gigabytes that DB2 should use for creating an implicit base table space. It is not used to create implicit LOB or XML table spaces. Valid settings are 1, 2, 4, 8, 16, 32, and 64.

**Enabled (enable or disable I/O parallelism for index inserts)**

This parameter indicates whether I/O parallelism for index insert is enabled. Valid values are YES and NO. The default is YES.

**Length in bytes (default inline lob length)**

Default length in single-byte characters for inline LOB columns when the INLINE LENGTH option is not specified in the definition of a LOB column in a CREATE TABLE statement or ALTER TABLE ADD column statement. Valid values are integers from 0 through 32680. 0, the default setting, means that LOB columns are to be created with no in line attribute by default.

**SMS STOR Class Name for catalogs**

This parameter indicates the SMS storage class, if any, for DB2 catalog and directory data sets. The default is null; otherwise, specify a valid SMS class name of 1 to 8 characters.

**Track Mods to Implicit TS Pages**

This parameter indicates whether DB2 will track modifications to the pages of implicitly created table spaces. This setting only pertains for the base table spaces. It is not used for implicitly created LOB or XML table spaces. Specify one of the following values:

- **YES**
  The default. Implicit table spaces will be created such that DB2 tracks changed pages in the space map pages to improve the performance of incremental image copy.

- **NO**
  DB2 does not track changed pages in the space map pages. It uses the LRSN value in each page to determine whether a page has been changed.

**Separate SEC from SYST Admin**

This parameter indicates whether to separate DB2 security administrator duties from DB2 system administrator duties for this subsystem. Valid values are Y (YES) and N (NO). The default is NO.
**DB2 Sort Use**

Enables the use of the DB2 Sort product (if it is installed) from utilities. Otherwise, DFSORT will be used. Valid values are ENABLE and DISABLE. The default is ENABLE.

**Ignore Sortnum**

Only valid if UTSORTAL is set to YES. If IGNSORTN is set to YES, this will cause utilities to dynamically allocate sort work data sets even if the SORTNUM parameter was specified in the utility statement. The specified SORTNUM value is ignored.

**RID LIMIT**

This parameter indicates the maximum number of RIDs DM1 (measured in RID blocks) that the subsystem is allowed to store in the work file when RID pool storage cannot be used to contain all of the RIDs. Each RID block stored in the work file occupies 32 KB of work file storage and contains 6524 RIDs. If the number RID blocks exceeds the MAXTEMPS_RID setting, DB2 resorts to R-scan. Specify one of the following values:

- **NONE**
  RID list processing will not use work file storage.

- **NOLIMIT**
  There are no restrictions on the number of RID blocks that can be stored in a work file. NOLIMIT is the default.

- **1 to 329166**
  The specified value maximum number of RID blocks that can be stored in the work file.

---

**NOTE**

A related parameter, MAXTEMPS, controls the maximum amount of temporary storage in the work file database that a single agent can use at any given time for any type of usage. The MAXTEMPS setting can override the MAXTEMPS_RID setting in cases where RID processing in combination with other work file activity for an agent exceeds MAXTEMPS. In this case, RID processing will resort to R-scan.

**Cost Reduction Percentage**

This parameter indicates the percentage of cost reduction for query processing to apply based on parallelism. Valid settings are integers from 0 to 100. The default is 50.

- If you set PARA_EFF to 100, DB2 will fully apply parallelism cost reduction.

- If you set PARA_EFF to 0, DB2 will choose the access path with the cheapest estimated sequential cost. This is the behavior prior to DB2 Version 9.
If you set PARA_EFF to a value between 1 and 99, this results in a less optimistic assumption regarding parallelism efficiency within DB2. DB2 will retain the DB2 9 behavior of allowing an access path which obtains (more) parallelism in the optimization decision, but the cost reduction is diluted.

The closer PARA_EFF is to 1, DB2 will still consider the parallelism reduction but it will have a proportionally reduced effect on the overall optimization choice. The closer PARA_EFF is to 100, the more aggressive DB2 will be at choosing an access path that has higher estimated processing costs to obtain an access path with more parallelism.

**Default Partitioned Tablespace segment size**

This parameter indicates the default segment size to be used for a partitioned table space when the CREATE TABLESPACE statement does not include the SEGSIZE parameter. The type of partitioned table space created depends on whether the CREATE statement specifies the MAXPARTITIONS and NUMPARTS clauses. Valid settings are 0 through 64, and must be divisible by 4 (0, 4, 8, 12, ..., 60, 64) The default is 32.

**CATALOG MANAGER for DB2 Browse**

These topics describe the changes or new features in this release of CATALOG MANAGER for DB2.

**DB2 Version 10 support and toleration**

CATALOG MANAGER supports or tolerates various features of the IBM DB2 Universal Database for z/OS subsystem.

**Supported features**

CATALOG MANAGER supports the following features of DB2 Version 10:

- **INCLUDE clause with a CREATE, ALTER, or DDL command on a unique index**

  The INCLUDE clause specifies an additional index key column that does not enforce the uniqueness of the index.

- **length of inline large object (LOB) columns**

  CATALOG MANAGER also supports LOB columns that are referenced in indexes on an expression and defaults for inline LOB columns that have a length defined.

- **DATE and TIMESTAMP data types in the AS SQL clause of an XML index**
enhancements to online reorganizations, including extending the PART parameter in the REORG TABLESPACE statement and adding the AUX keyword to the SHRLEVEL REFERENCE and SHRLEVEL CHANGE parameters

CATALOG MANAGER can use the IBM REORG utility to reorganize a LOB table space by performing an online reorganization with the SHRLEVEL CHANGE option.

hash access path for accessing rows by using a hash key

MEMBER CLUSTER clause in a CREATE TABLESPACE and an ALTER TABLESPACE statement for a partition-by-growth or range-partitioned table space

precision value for a TIMESTAMP data type

TIMESTAMP WITH TIME ZONE data type

temporal tables with the BUSINESS_TIME or SYSTEM_TIME period

DEFINE NO LOB and XML table spaces (and their dependent indexes)
pending definition changes for table spaces and indexes

CATALOG MANAGER also supports the DROP PENDING CHANGES clause on the ALTER TABLESPACE statement.

the following new or modified BIND and REBIND options for plans and packages:

— CONCURRENTACCESSRESOLUTION
— EXPLAIN
— EXTENDEDINDICATOR
— SQLERROR

BIND QUERY and FREE QUERY commands

the following SYSTEM privileges for the DCL, GRANT, HGRANT, and REVOKE commands:

— ACCESSCTRL
— CREATE_SECURE_OBJECT
— DATAACCESS
— DBADM
— EXPLAIN
— SQLADM

SECURED option in CREATE TRIGGER, ALTER TRIGGER, CREATE FUNCTION, and ALTER FUNCTION statements
row and column access control through row permissions and column masks, as follows:

— generates DDL and MDDL on permission (PM) and mask (MK) objects

— generates ALTER PERMISSION, CREATE PERMISSION, ALTER MASK, and CREATE MASK statements

— generates HDDL and enables the drop recovery function to generate DDL for the ALTER TABLE ACTIVATE ROW ACCESS CONTROL and ALTER TABLE ACTIVATE COLUMN ACCESS CONTROL statements

skip-level migration

CATALOG MANAGER support migrating to DB2 Version 10 from DB2 Version 8, which introduces several new migration modes:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM8</td>
<td>conversion mode from DB2 Version 8</td>
</tr>
<tr>
<td>CM8*</td>
<td>conversion mode* from DB2 Version 8</td>
</tr>
<tr>
<td>CM9</td>
<td>conversion mode from DB2 Version 9</td>
</tr>
<tr>
<td>CM9*</td>
<td>conversion mode* from DB2 Version 9</td>
</tr>
<tr>
<td>ENFM8a</td>
<td>enabling-new-function mode from DB2 Version 8</td>
</tr>
<tr>
<td>ENFM8*</td>
<td>enabling-new-function mode* from DB2 Version 8</td>
</tr>
<tr>
<td>ENFM9a</td>
<td>enabling-new-function mode from DB2 Version 9</td>
</tr>
<tr>
<td>ENFM9*</td>
<td>enabling-new-function mode* from DB2 Version 9</td>
</tr>
<tr>
<td>NFM</td>
<td>new-function mode</td>
</tr>
</tbody>
</table>

a Before using CATALOG MANAGER in this mode, you must run the IBM DSNTIJEN job to successful completion. DSNTIJEN converts DB2 to enabling-new-function mode from DB2 Version 8 or 9.1. Successful completion of DSNTIJEN completes catalog migration. If DSNTIJEN does not complete successfully, CATALOG MANAGER issues the following message:

CATALOG CONVERSION HAS BEEN STARTED BUT HAS NOT COMPLETED. USING A PARTIALLY CONVERTED DB2 CATALOG MAY CAUSE UNPREDICTABLE RESULTS.

For earlier versions of DB2, CATALOG MANAGER also supports the use of 128-byte object names in the DESCRIBE command for tables and views.
**Tolerated features**

CATALOG MANAGER tolerates the following features of DB2 Version 10:

- CATALOG MANAGER tolerates the definition of an XML-type modifier on an XML column definition to validate the XML schema feature of DB2 Version 10.

- For DB2 Version 10, the REVOKE_DEP_PRIVILEGES subsystem parameter controls whether revoking the privileges of one SQLID causes DB2 to revoke privileges of additional SQLIDs. How you set this DSNZPARM parameter affects your ability to modify the REVOKE statements that CATALOG MANAGER generates in the Confirm SQL for Revoke Reassign panel:
  - If REVOKE_DEP_PRIVILEGES = NO, DB2 does not assign the privileges that DB2 would revoke as the result of a REVOKE command to another SQLID. That is, on the Confirm SQL for Revoke Reassign panel, you cannot perform the following actions:
    - In the Reassign Grants field, type Y to reassign the privileges to the SQLID specified in the Reassign GRANTOR field.
    - In the Reassign GRANTOR field, type the SQLID of a new grantor for the cascading authorizations.
  
  You can, however, issue the CASCADE command on an object to create a report that shows the hierarchy of authorizations for a DB2 object and the implications of issuing a REVOKE command.

  - If REVOKE_DEP_PRIVILEGES = SQLSTMT, you can assign the privileges that DB2 would revoke as the result of a REVOKE command to another SQLID. However, if CATALOG MANAGER encounters a DB2 Version 10 authorization feature, the product issues an error message.

If you are using a version of CATALOG MANAGER that does not tolerate or exploit the features of the version of DB2 that you are using, the product issues a message.

**Connect to a remote IBM DB2 subsystem from a location list**

To connect to a remote DB2 SSID from a location (LO) list, you can now use one of the following methods:

- Issue the CONNECT command from the Cmd field on a location list.
- Issue the CONNECT BATCH command on a location list.

You can also edit the SYSIN input stream and specify the CONNECT command.
DB2 commands on a remote DB2 SSID and in batch mode

To issue DB2 commands to display, start, or stop objects, you can now use one of the following methods:

- Connect to a remote DB2 SSID and issue the DISPLAY, START, or STOP command from the Cmd field on an object list.

  **NOTE**
  Before you can issue DB2 commands on a remote DB2 SSID, the SYSPROC.ADMIN_COMMAND_DB2 stored procedure must be installed and available. Otherwise, the commands will fail.

- Issue the DISPLAY BATCH, START BATCH, or STOP BATCH command on an object list.

  You can issue these commands from a remote DB2 SSID to which you have connected, or from a local DB2 SSID.

- Edit the SYSIN input stream and specify the DISPLAY, START, or STOP command.

Commands table

In previous releases, the COMD installation option enabled you to specify a user commands table name and optionally copy an existing user commands table module. CATALOG MANAGER no longer uses this installation option.

The commands that CATALOG MANAGER lists in the Commands List panel are defined in the primary commands table in the ACTCOMND member of the HLQ.DBCNTL library. This member contains all of the correct values for your installation. The contents vary among versions of CATALOG MANAGER.

Although you cannot modify the ACTCOMND member directly, you can create a user commands table. This table contains your modifications to existing commands and any new commands, and overrides the primary commands table. You specify your user commands table in the UCOMD installation option. When you invoke CATALOG MANAGER, the product merges the primary commands table with your user commands table.
Enhancements to the Commands List panel

CATALOG MANAGER now groups the commands on the Commands List panel in the following categories:

- CATALOG MANAGER commands
- DB2 action commands
- utility commands
- statistics commands
- list commands
- user commands

The panel now lists the command, the command type, and the list of the valid list types from which you can enter the command or the valid object types.

Data in LOB columns

You can now browse up to 2 MB of data in LOB columns.

Drop tables with RESTRICT ON DROP

When you specify to drop a database, table space, or table, CATALOG MANAGER can now analyze each DROP command to determine whether a table includes the DROP RESTRICT attribute. If the table contains the attribute, the product can generate an ALTER TABLE DROP RESTRICT ON DROP command before the DROP command. To enable this functionality, type Y in the Remove DROP RESTRICT field on the Confirm DROP panel.

New option for TERSE/VERBOSE

The General Options panel now provides an option to specify how much output you want CATALOG MANAGER to produce in the DDL process (terse or verbose). This option is supported only for partitioned table spaces and indexes.
SET CURRENT SQLID statement

In previous releases, CATALOG MANAGER did not generate a SET CURRENT SQLID = grantor statement before each GRANT statement. With this release, CATALOG MANAGER provides the Build SQLID before GRANT switch that enables generating the SET CURRENT SQLID statement before each GRANT statement. CATALOG MANAGER generates these GRANT statements for the following commands:

- HGRANT
- HDDL (with the HDDL Auths switch set to Y)
- REVOKE (with the Reassign Grants option)
- DCL
- COPYAUTHS

New lists

CATALOG MANAGER now provides the following lists:

<table>
<thead>
<tr>
<th>List command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APO</td>
<td>lists the audit policies from the SYSIBM.SYSAUDITPOLICIES table</td>
</tr>
<tr>
<td>ARH</td>
<td>lists historical information about autonomic stored procedures in the SYSIBM.SYSAUTORUNS_HIST table</td>
</tr>
<tr>
<td>ATS</td>
<td>lists statistics alerts from autonomic stored procedures in the SYSIBM.SYSAUTOALERTS table</td>
</tr>
<tr>
<td>ATW</td>
<td>lists time windows for running autonomic stored procedures in the SYSIBM.SYSAUTOTIMEWINDOWS table</td>
</tr>
<tr>
<td>MK</td>
<td>lists the column masks from the SYSIBM.SYSCONTROLS table</td>
</tr>
<tr>
<td>PDD</td>
<td>lists information about the objects that have pending changes to data definitions from the SYSIBM.SYSPENDINGDDL table</td>
</tr>
<tr>
<td>PGC</td>
<td>lists the package copies from the SYSIBM.SYSPACKCOPY table</td>
</tr>
<tr>
<td>PM</td>
<td>lists the row permissions from the SYSIBM.SYSCONTROLS table</td>
</tr>
<tr>
<td>QRO</td>
<td>lists the optimization parameters for queries from the SYSIBM.SYSQUERYOPTS table</td>
</tr>
<tr>
<td>QRP</td>
<td>lists the plan hint information for queries from the SYSIBM.SYSQUERYPLAN table</td>
</tr>
<tr>
<td>QRY</td>
<td>lists the queries from the SYSIBM.SYSQUERY table</td>
</tr>
<tr>
<td>TBP</td>
<td>lists the table profiles from the SYSIBM.SYSTABLES_PROFILES table</td>
</tr>
</tbody>
</table>
New commands

CATALOG MANAGER now provides the following commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCHANGE</td>
<td>exchanges data between two tables, one of which must be a clone of the other</td>
</tr>
<tr>
<td>TRUNCATE</td>
<td>deletes all rows for a base or global temporary table</td>
</tr>
<tr>
<td>TYPES</td>
<td>shows the available lists that CATALOG MANAGER can display</td>
</tr>
</tbody>
</table>

Enhanced commands

CATALOG MANAGER has enhanced the functionality of the HGRANT and HDDL commands:

- You can now issue the HGRANT command on views (VW). The HGRANT command enables you to grant privileges on a hierarchy of DB2 objects.
- You can now issue the HDDL command on procedures (PR) and native SQL procedures (NP). The HDDL command generates DDL to create a hierarchy of objects.

SQL area size

The SQL and Confirm Options panel no longer provides an option for you to specify the memory size for the work area that CATALOG MANAGER uses for processing SQL (SQL area size field). Now, CATALOG MANAGER always uses 2 MB for the memory size.

Display of packages for sequence objects

You can now issue the PG (package) command on a sequence object in a Sequences List. The dependency of the package on the sequence object must be specified in the SYSIBM.SYSPACKDEP catalog table.

Exclusion of MQTs from HDDL

In the Object Use Options panel, you can specify whether to include objects in the CREATE statements that the HDDL command produces. With this release, when you choose to exclude tables from the HDDL, CATALOG MANAGER also excludes materialized query tables (MQTs).
Ability to execute DDL generated in batch

In previous releases, when you used the BATCH keyword with the DDL command, CATALOG MANAGER generated comments at the top of the output file. These comments were preceded by an asterisk (*) in column 1. As a result, you could not execute the DDL without first manually deleting the comments. CATALOG MANAGER now precedes these comments with dashes (--) in columns 1 and 2. Thus, you no longer need to delete the comments before you execute the DDL.

Refreshed user options

The following installation options now include ,R in the variable syntax. ,R indicates that the specified value will refresh the existing value of the variable in the user’s ISPF profile data set:

- ADSN
- BDSN
- CUP
- JDSN
- LDSN
- PDSN
- TDSN
- WDSN

Expanded views list

In previous releases, when you issued a VW (view) command on a database or a table space, CATALOG MANAGER displayed only the views in the SYSIBM.SYSTABLES catalog table that were type V and that matched the database name or table space name. CATALOG MANAGER now displays all of the views that are associated with the database or table space.

Expanded Session Log

The Session Log captures information pertaining to actions invoked by users during a CATALOG MANAGER session. With this release, the Session Log also captures actions that are performed with the data browsing and data editing functions.
**Space estimates**

You can use the BMC Simple Space Estimation (SSE) feature to determine the amount of space that a table space or index will require based on data structure definitions and their estimated usages. This feature does not require you to have the BMCSTATS component of the BMC DASD MANAGER PLUS for DB2 product installed. To initiate the feature, type **SSE** on the Command line.

**HEX command**

BMC is deprecating the HEX command in this release.

**MEMLIMIT system parameter**

The JCL Generation component now supports the MEMLIMIT system parameter, which limits above-the-bar memory for an address space. You can specify a MEMLIMIT value in the JCL Generation Jobcard Options panel, or in the MEMLIMIT keyword in the product options file (POF).

**POF keywords for flashcopies**

The JCL Generation component now offers the following POF keywords to support creating flashcopies (point-in-time copies of a volume) with the IBM FlashCopy® feature:

- FCPY_DATACLASS
- FCPY_EXPDT
- FCPY_MGMTCLASS
- FCPY_PREFIX
- FCPY_PRIQTY
- FCPY_RETPD
- FCPY_SECQTY
- FCPY_STORCLASS
- FCPY_SUPPRESS_SUFF
- FCPY_UNIT
POF keywords to suppress the DD name for copy data sets

The JCL Generation component offers the following POF keywords to suppress adding DD names to prefixes for the copy data sets:

- FCPY_SUPPRESS_SUFF
- PCPY1_SUPPRESS_SUFF
- PCPY2_SUPPRESS_SUFF
- RCPY1_SUPPRESS_SUFF
- RCPY2_SUPPRESS_SUFF

RUNTIME_HLQ

The RUNTIME_HLQ POF keyword supports the following symbolic variables:

- &DB2V2 and &DB2V3, which resolve to the version of DB2
- &SSID, which resolves to the DB2 subsystem ID

When you include the &SSID symbolic variable, the product can use a single POF with multiple subsystems.

Maximum number of tape volumes

You can now specify 0 for the maximum number of tape volumes. BMC recommends specifying 0 when you are using any of the following items:

- BMC UNLOAD PLUS utility
- dynamically allocated data sets
- IBM Storage Management Subsystem (SMS) to manage tape allocations

You can set this value on the JCL Generation Tape Options Update panel or with the TAPE_VOLCNT POF keyword.

Installation

Known installation issues

This section describes installation issues that remain open in this release.

DB2 Version 10 security parameter

If both of the following conditions exist at your site, contact BMC Customer Support before attempting to use the Installation System to customize your BMC products:

- Your subsystem is using DB2 Version 10.
- The DSNZPARM SEPARATE_SECURITY subsystem parameter is set to YES.

DB2 Product Configuration component

The name of the BMC Product Management (BPM) component is changing to the DB2 Product Configuration component (FMID ZLGCxxx). Documentation for the April 2011 release reflects the name change. A future release of the Installation System will replace BPM with DB2 Product Configuration in the installation panels and associated Help.

FMIDSETs

For products that contain the ZDIG190 FMID as part of an FMIDSET, attempting to run an apply check job ($B75APCF or $B80APCP) or an apply job ($B76APLF or $B81APLP) might result in the following errors:

GIM24801S ** NO SYSMODS SATISFIED THE OPERANDS SPECIFIED ON THE APPLY COMMAND.
GIM20501I APPLY PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 12.

To address this issue, take the appropriate action as follows:

- If you have not yet generated the installation ($B) jobs, ensure that the Create FMIDSETs field on the Data Set Options panel is set to No (the default) before proceeding.

NOTE

To request physical shipments, contact your BMC sales representative. Contact information is available on the BMC website.
If you have already generated the installation jobs and received the specified error, run the #D9 jobs to delete the data sets, and regenerate the JCL by using FMIDs instead of FMIDSETs.

BMC plans to correct this issue in the next release of the Installation System.

**PUT level**

(MainView products only) The Installation System incorrectly indicates PUT level PUT ####@ during initialization. (No first-quarter 2011 PUT was delivered.) Apply the correcting PTF (BPA1402) to fix this issue.

**Maintenance requirements**

After you install System Performance, perform the following steps:

1. Apply all of the maintenance on the SMP/E service file for the products and components that you installed by using either the Custom or Express installation method.

2. Download the following additional, required PTFs from eFix PTF Distribution Services (eFix) and apply the PTFs before you run Customization:
   - BPA1393
   - BPJ0419
   - BPU3483

   To access or eFix PTF Distribution Services, go to (http://apps.bmc.com/support/efix.cgi).

3. After customization, obtain additional maintenance by using either eFix or BMC Internet Service Retrieval (ISR).

**Installation changes**

The Installation System includes the following changes:

- The Product Customization menus accommodate new features, such as the DB2 Product Configuration technology, the DB2 Component Services (DBC), and the Next Generation Logger (NGL). Some MainView products and the System and SQL Performance products use this technology.
You can use a new feature, BMC Internet Service Retrieval (ISR). BMC ISR identifies and applies fixes to all products that you install via the Installation System. For more information, see the “Applying maintenance” chapter in the System and SQL Performance for DB2 Installation Guide.

When you are customizing System Performance within the Installation System, you must now perform both regular OZI customization and MainView customization. Most solution features are installed using OZI customization. The RTCS component that is used by the DBC and the NGL requires MainView customization.

Version and FMID information

This release of System Performance uses the following versions of the Installation System and installation media:

- version 2.3.10 or later of the Installation System
- version 2.3.10 or later of the C-series installation media

**NOTE**

If you have a later version of the Installation System or the installation media, use that version to install the solution, product, or component.

During installation, the following versions and SMP/E FMIDs are installed:

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
<th>FMID</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Common Explain (PSS)</td>
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<td>Common Infrastructure (DAA)</td>
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<td>DB2 Component Services (DBC)</td>
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<td>DB2 Product Configuration</td>
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</table>
## Maintenance

### The preceding table contains the FMIDs for BMC System Performance only. During installation, view one of the following generated JCL members to see a list of FMIDs for all of the products that you are installing:

- Express installation (JES2): $B90SMPE
- Express installation (JES3): $B91SMPE
- Custom installation: $B76APLF

To search the file, search on the word **FMID**.

### Maintenance

After you install BMC System Performance, you can download any additional SMP/E maintenance by using either BMC Internet Service Retrieval (ISR) or eFix PTF Distribution Services ([http://apps.bmc.com/support/efix.cgi](http://apps.bmc.com/support/efix.cgi)). BMC ISR is available for all products that you install via the Installation System. For more information, see your installation guide.

---

**NOTE**

Before applying maintenance, ensure that you have completed the appropriate jobs (based on your installation method) to set up your maintenance environment, as follows:

- Custom installation: $B78ACPF and $B83ACCP
- Express installation (JES2): $B90SMPE
- Express installation (JES3): $B90SMPE and $B91SMPE

### Table

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
<th>FMID</th>
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<tbody>
<tr>
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<td>Runtime Component System (RTCS) C Library</td>
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<td>ZMRE100</td>
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<td>SAS/C Resident Library</td>
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<tr>
<td>User Interface Middleware Common Services (USC)</td>
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</table>
PUT maintenance schedule

BMC did not deliver first-quarter PUT maintenance (PUT1101A). Instead, BMC will deliver that maintenance as part of the second-quarter cumulative maintenance in PUT1101B. For information about the PUT delivery schedule, see http://www.bmc.com/support/put-availability-schedule.html.

In the interim, you can use the new BMC Internet Service Retrieval (ISR) feature to identify and apply fixes to all products that you installed via the Installation System. BMC ISR simplifies ordering and retrieving service updates, either on demand or through your scheduler. You can use BMC ISR to inventory your target zones and generate a single request, or schedule a request on a recurring basis to retrieve maintenance updates. For more information, see the maintenance section of your installation guide.

Support status

BMC supports the following versions of System Performance and its components:

<table>
<thead>
<tr>
<th>Solution or Component</th>
<th>Version</th>
<th>Level of support</th>
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<td></td>
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<td>limited</td>
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<tr>
<td></td>
<td>5.3.00</td>
<td>none</td>
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<tr>
<td>MainView for DB2</td>
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<td>full</td>
</tr>
<tr>
<td></td>
<td>9.2.00</td>
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<td>6.2.00</td>
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<tr>
<td></td>
<td>5.3.00</td>
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</tbody>
</table>
For more information about the latest support policies, see the Customer Support website at [http://www.bmc.com/support](http://www.bmc.com/support).

## Product documentation

BMC provides a documentation CD in product shipments and offers a link to the CD image on the EPD page of the Customer Support website. Individual product documents (books and notices) are also available on the website. You can order hardcopy documentation from your BMC sales representative or from the website. You can also subscribe to proactive alerts to receive e-mail messages when notices are issued or updated.

## Customer support

If you have problems with or questions about a BMC product, see the Customer Support website at [http://www.bmc.com/support](http://www.bmc.com/support). You can view or download product documents, find answers to frequently asked questions, and download products and maintenance. If you do not have access to the web and you are in the United States or Canada, contact Customer Support at 800 537 1813. Outside the United States or Canada, contact your local BMC office or agent.

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