OPERTUNE for DB2®
Reference Manual

Supporting

Version 6.2 of OPERTUNE for DB2
Version 6.2 of System Performance for DB2

November 2008
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About this book

This book contains detailed information about OPERTUNE and is intended for system programmers, DB2 system administrators, DB2 database administrators, and DB2 application programmers.

Like most BMC documentation, this book is available in printed and online formats. To request printed books or to view online books and notices (such as release notes and technical bulletins), see the Customer Support website at http://www.bmc.com/support_home. Most product shipments also include the books on a documentation CD.

**NOTE**

Online books are formatted as PDF or HTML files. To view, print, or copy PDF books, use the free Adobe Reader from Adobe Systems. If your product installation does not install the reader, you can obtain the reader at http://www.adobe.com.

The software also offers online Help. To access Help, press F1 within any product or click the Help button in graphical user interfaces (GUIs).

Related publications

The following related publications supplement this book and the online Help:

<table>
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<tr>
<th>Category</th>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>installation documents</td>
<td><strong>System and SQL Performance for DB2 Customization Guide</strong></td>
<td>provides information to prepare for installation and to customize the products after installation to prepare them for use</td>
</tr>
<tr>
<td></td>
<td><strong>OS/390 and z/OS Installer Guide</strong></td>
<td>provides information for using the application that generates a set of JCL batch jobs used to unload the product files from the distribution tape or download them from BMC Software’s FTP site</td>
</tr>
</tbody>
</table>
## Conventions

This book 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:**

  \[
  \text{IN(DB2ssid@opertuneID) ADDLOG}
  \]

- **The symbol => connects items in a menu sequence. For example, Actions => Create Test instructs you to choose the Create Test command from the Actions menu.**

### Document Descriptions

<table>
<thead>
<tr>
<th>Category</th>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>core documents</td>
<td><strong>OPERTUNE for DB2 General Information</strong></td>
<td>provides overview information about OPERTUNE, including a list of features and examples of elements</td>
</tr>
<tr>
<td></td>
<td><strong>OPERTUNE for DB2 Reference Summary</strong></td>
<td>provides a list of the OPERTUNE commands and a cross-reference of the OPERTUNE elements to the DB2 ZPARMs</td>
</tr>
<tr>
<td>supplemental</td>
<td>release notes</td>
<td>describes what is new or modified for this release of OPERTUNE as well as listing the problems in previous versions that were corrected in this release</td>
</tr>
<tr>
<td>document</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Panel-flow diagrams

Panel-flow diagrams summarize the ISPF panels that you see while completing specific tasks. The following example explains how to read a panel-flow diagram:

Syntax statements

The following example shows a sample syntax statement:

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

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

<table>
<thead>
<tr>
<th>Item</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 |
| Brackets indicate a group of optional items. Do not type the brackets when you enter the option. A comma means that you can choose one or more of the listed options. You must use a comma to separate the options if you choose more than one option. | [tableName, columnName, field]  
[-full, -incremental, -level] (UNIX) |
<table>
<thead>
<tr>
<th>Item</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braces indicate that at least one of the enclosed items is required. Do not type the braces when you enter the item.</td>
<td>`{DBDName</td>
</tr>
<tr>
<td></td>
<td>UNLOAD device={disk</td>
</tr>
<tr>
<td></td>
<td>{-a</td>
</tr>
<tr>
<td>A vertical bar means that you can choose only one of the listed items. In the example, you would choose either commit or cancel.</td>
<td>`{commit</td>
</tr>
<tr>
<td></td>
<td>{-commit</td>
</tr>
<tr>
<td>An ellipsis indicates that you can repeat the previous item or items as many times as necessary.</td>
<td><code>columnName . . .</code></td>
</tr>
</tbody>
</table>
Syntax diagrams

Read syntax diagrams from left to right and top to bottom.

The following conventions are used to diagram the syntax of commands and control statements:

- Required items are shown on the main line.
- Optional items are shown below the main line.
- Defaults are shown above the main line.
- If you must choose one item from two or more required items, the items are vertically stacked and the first item in the stack is shown on the main line.
- If you can choose from two or more optional items, the items are vertically stacked and the entire stack (except for the default) is shown below the main line.
Syntax diagrams

- If you can choose more than one item, a recursive arrow is shown above the keyword, value, or stack.

- If multiple values must be separated by a delimiter, the required delimiter is shown on the recursive arrow.

- Actual values and keywords are shown in uppercase letters; variables are shown in lowercase letters.

- Values in uppercase must be typed as shown except where the text indicates that other abbreviations can be used.

- If a value in uppercase letters can be shortened, the minimum portion that is required is displayed in larger uppercase letters than the remainder of the word (for example, CANCEL).

- Parentheses must be used as shown.
OPERTUNE features and benefits

The OPERTUNE product enables you to modify DB2 Universal Database subsystems and DB2 sharing groups dynamically by using features such as parameter elements, operational assists, and group and schedule profiles:

- Parameter elements let you modify subsystem parameters, such as the castout reverse threshold or the dual archiving mode, as needed.

- Operational assists help you to respond to common operational problems (for example, by canceling threads and maintaining archives)

- Group profiles and schedule profiles enable you to assign commands to groups and then implement changes automatically by scheduling the command groups to run at optimal times.
Using these features of OPERTUNE, you can

- modify DB2 parameters to relieve current problems or bottlenecks
- dynamically tune subsystems
- adapt resource assignment or allocations to workload fluctuations
- enhance 24 hours a day, 7 days a week continuous operations for subsystems
- enhance automated operations for DB2
- dynamically add and remove active logs
- tune remote subsystems through VTAM
- test applications with different subsystem parameters without recycling the subsystem
- cancel a thread that is draining resources without canceling the thread’s address space
- tune buffer pool and group buffer pool parameters
- manage subsystem archives

**NOTE**

OPERTUNE is also a component of the System Performance for DB2 solution from BMC Software.

---

**OPERTUNE elements**

Each OPERTUNE element corresponds to one or more changeable parameters in DB2. Some of the elements correspond to ZPARM parameters (such as buffer pool size), but others are unique to OPERTUNE (such as the prefetch quantity for a buffer pool). With OPERTUNE, you can make immediate modifications to a parameter value without cycling the subsystem.

Specifically, you can use OPERTUNE to

- query an element to obtain its current status
- set an element to a new value
- reset an element to its original ZPARM value

Operational assists

From the OPERTUNE Operational Assist Menu, you can access assistance with any of the items listed in the menu:

<table>
<thead>
<tr>
<th>OPRX  DBDC+</th>
<th>Operational Assist Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command ===&gt;</td>
<td></td>
</tr>
<tr>
<td>Choose one of the following OPERTUNE Operational Assist functions by number. Then press Enter.</td>
<td></td>
</tr>
<tr>
<td>1. Active log manipulation</td>
<td></td>
</tr>
<tr>
<td>2. Cancel threads/connections</td>
<td></td>
</tr>
<tr>
<td>3. Update archive log BSDS entries</td>
<td></td>
</tr>
<tr>
<td>4. Initiate a subsystem checkpoint</td>
<td></td>
</tr>
<tr>
<td>5. Free form commands</td>
<td></td>
</tr>
<tr>
<td>6. Free up table spaces</td>
<td></td>
</tr>
<tr>
<td>7. Reload user exits</td>
<td></td>
</tr>
<tr>
<td>8. Change DDF parameters</td>
<td></td>
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<tr>
<td>9. Group buffer pool operations</td>
<td></td>
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<tr>
<td>10. Open data component operations</td>
<td></td>
</tr>
<tr>
<td>11. Reload DSNHDECP option default module</td>
<td></td>
</tr>
<tr>
<td>12. Peer Log Operations</td>
<td></td>
</tr>
<tr>
<td>13. Tablespace in exception status</td>
<td></td>
</tr>
<tr>
<td>14. Utility Job Status</td>
<td></td>
</tr>
</tbody>
</table>

For example, you can use the **Cancel threads/connection** option to cancel any of the following types of threads:

- any thread or connection executing within DB2
- IMS or CICS threads that are inactive in DB2 (that is, canceled on the next call to DB2)
- TSO and batch threads (canceled whether they are active or inactive in DB2)

You might also need to prepare a table space for utility maintenance. You can use the **Free up table spaces** option to

- cancel all users of a specific table space
- stop a table space before canceling all of its users
- selectively cancel users of a table space

For a complete description of each operational assist, see Chapter 4, “Operational Assists.”
Group profiles and schedule profiles

You can combine element and free-form commands into *group profiles* so that OPERTUNE can issue the commands collectively. Using group profiles is useful for setting parameters that meet the needs of a known workload, such as end-of-the-month processing.

You can also set up *schedule profiles* to implement group changes automatically at designated times. For example, you might want to set up different group profiles with different ZPARM settings as follows, then create a schedule to run the groups at optimal times:

- Set up one schedule profile to handle the heavy load of interactive, random-access programs that run during the day.
- Set up a second group profile to run at night, when sequential batch programs are running.
- Set up a third group profile to run on the weekends, when the work load differs from weekday processing.

One schedule can make all these changes, as shown in Figure 1.

**Figure 1** Groups in a schedule

<table>
<thead>
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<th>Schedule 1</th>
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</tr>
</tbody>
</table>

For a detailed description of group profiles, see Chapter 5, “Group profiles.” For a detailed description of schedule profiles, Chapter 6, “Schedule profiles.”
OPERTUNE configurations

You can run OPERTUNE in any of the following configurations:

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<th>Configuration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>single</td>
<td>one OPERTUNE system running on one MVS system</td>
</tr>
<tr>
<td>multiple</td>
<td>multiple OPERTUNE systems running on one MVS system</td>
</tr>
<tr>
<td>remote</td>
<td>OPERTUNE system running on local and remote MVS systems</td>
</tr>
</tbody>
</table>

To understand OPERTUNE configurations, you should be familiar with the following terms:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>host OPERTUNE</td>
<td>The host OPERTUNE resides on the same MVS as the dialog user. The host is responsible for processing dialog requests, turning them over to</td>
</tr>
<tr>
<td></td>
<td>the target OPERTUNE, and receiving and displaying results from the target OPERTUNE.</td>
</tr>
<tr>
<td>target OPERTUNE</td>
<td>The target OPERTUNE is responsible for receiving and responding to requests from the host OPERTUNE:</td>
</tr>
<tr>
<td></td>
<td>■ the target and the host might be the same OPERTUNE (single configuration)</td>
</tr>
<tr>
<td></td>
<td>■ The target might e a different OPERTUNE residing on the same MVS (multiple configuration)</td>
</tr>
<tr>
<td></td>
<td>■ The target might reside on a different MVS system (remote configuration)</td>
</tr>
<tr>
<td></td>
<td>Communication is accomplished through XCF or VTAM if the host and target OPERTUNE are distinct.</td>
</tr>
</tbody>
</table>
Single configuration

The single configuration uses only one OPERTUNE system as both the host and the target (Figure 2). If you have only one OPERTUNE on your MVS system, that OPERTUNE automatically becomes the default host.

**Figure 2  Single OPERTUNE configuration**
Multiple configuration

The multiple configuration uses two or more OPERTUNE systems on one MVS system. You might define one OPERTUNE to control a test subsystem and another to control a production system. You can authorize certain users for the test OPERTUNE and others for the production OPERTUNE. (However, an alternative is to define only one OPERTUNE for both subsystems and then limit user access through the subsystems instead of through OPERTUNE.)

A multiple configuration is also useful if you need to separate the OPERTUNE logs of multiple subsystems. In this scenario, you can designate one OPERTUNE for one set of subsystems and a separate OPERTUNE for another set of subsystems.

For example, assume you are user TSOA and you have designated OPTA as the host OPERTUNE (Figure 3). To modify DB2A, DB2B, or DBSA, you can select OPERTUNE A/APPLA as the target OPERTUNE. To modify DBSB or DB2C, you can select OPERTUNE B/APPLB as the target OPERTUNE.

Figure 3 Multiple OPERTUNEs on an MVS system

The host defaults to an active OPERTUNE when you begin a session. If more than one OPERTUNE is active, the host defaults to the host OPERTUNE of your previous session if that OPERTUNE is active. If that OPERTUNE is inactive, a selection menu is presented.

If you want to use a multiple configuration, you can use the procedure in “Selecting a host OPERTUNE” on page 42 to set up your host.

NOTE

A single OPERTUNE can connect to multiple subsystems, allowing you to control multiple DB2 subsystems from a single source. However, each subsystem can be under the control of only one OPERTUNE at a time.
Remote configuration

The remote configuration allows OPERTUNE on one MVS system to communicate with OPERTUNE on another MVS system. This configuration requires either XCF or VTAM cross-domain communications, as illustrated in Figure 4.

Considerations for remote configurations are as follows:

- XCF communications are possible only if the host and target OPERTUNE have the same XCF group defined in their system profiles.

- VTAM communications are possible only if the host and target OPERTUNEs have VTAM APPLIDs defined in the system profile.

- You can define both a VTAM APPLID and an XCF group for the same OPERTUNE, and you can use both XCF and VTAM for remote communications with other OPERTUNE systems.

For more information about VTAM support, see Chapter 9, “VTAM support.” For more information about sysplex support, see Chapter 10, “Sysplex considerations.”
OPERTUNE administration

User and system profiles control OPERTUNE administration:

- **User profiles** define users to OPERTUNE with authorization indicators. For example, a user could be granted the authority to modify DB2 parameters, to use the operational assists, or to customize profiles (system, user, group, schedule).

- **System profiles** define the OPERTUNE system with its name, the VTAM APPLID, authorization indicators, and the DB2 subsystems that OPERTUNE is allowed to modify. All profiles are stored in a single KSDS VSAM data set.

For more detailed information about OPERTUNE administration, see Chapter 12, “Administrative functions.”

Product requirements

OPERTUNE requires specific software and system environments.

Software requirements

OPERTUNE requires the following systems and programs:

- z/OS version 1.4 and later and z/OS.e running on 64-bit-enabled architecture
- DB2 UDB for z/OS and OS/390 version 7 or DB2 UDB for z/OS version 8
- TSO/E—any release supported by the supported releases of DB2
- ISPF—any release supported by the supported releases of DB2
- ACF/VTAM version 4.2 or later (if using the VTAM option)
- DB2 Solution Common Code (SCC) version 1.5.00

Special requirements

OPERTUNE must execute from an APF-authorized load library.

**NOTE**

You must have an entry for OPERTUNE in the AUTHPGM section of the IKJTSOxx member DDTAUTH program.
Storage estimates

OPERTUNE requires sufficient DASD and CPU storage to operate effectively.

**DASD space**

Table 1 summarizes the amount of DASD space that OPERTUNE needs.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC.DDT.CLIST</td>
<td>1 cylinder</td>
</tr>
<tr>
<td>BMC.DDT.CNTL</td>
<td>1 cylinder</td>
</tr>
<tr>
<td>BMC.DDT.SAMP</td>
<td>1 cylinder</td>
</tr>
<tr>
<td>BMD.DDT.LOAD</td>
<td>15 cylinders</td>
</tr>
<tr>
<td>BMC.DDT.PLLIB</td>
<td>10 cylinders</td>
</tr>
<tr>
<td>BMC.DDT.MLIB</td>
<td>1 cylinder</td>
</tr>
<tr>
<td>BMC.DDT.TLIB</td>
<td>1 cylinder</td>
</tr>
</tbody>
</table>

**CPU usage**

The percentage of CPU usage that OPERTUNE requires depends on the number of command requests received and how frequently OPERTUNE collects sample data. The CPU usage value is usually less than 0.1 percent of the total MVS CPU usage, although the value could range as high as 1 percent if your sample frequency is high.

**Virtual storage**

The amount of virtual storage used by OPERTUNE depends on a number of factors, some of which you can control through OPERTUNE administration. Most storage allocated by OPERTUNE exploits MVS/XA extended addressing for common and private storage requests. In general, the only storage obtained below the 16-MB address line is storage required for I/O (for example, data control blocks, or DCBs) and save areas.

**TSO dialogs**

The private virtual storage requirements for TSO dialogs are as follows:

- above the 16-MB line—550 KB
- below the 16-MB line—50 KB
# OPERTUNE address space

Table 2 summarizes the virtual storage requirements for the OPERTUNE address space.

## Table 2 Virtual storage requirements

<table>
<thead>
<tr>
<th>Storage type</th>
<th>Storage requirements above the 16-MB line</th>
<th>Storage requirements below the 16-MB line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>700 KB</td>
<td>50 KB</td>
</tr>
<tr>
<td></td>
<td>4 KB per schedule</td>
<td>5 KB per DB2 subsystem</td>
</tr>
<tr>
<td></td>
<td>4 KB per group</td>
<td>10 KB per VTAM remote</td>
</tr>
<tr>
<td></td>
<td>4 KB per VTAM request</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 KB per XCF member</td>
<td></td>
</tr>
<tr>
<td>Common</td>
<td>450 KB</td>
<td>100 bytes</td>
</tr>
<tr>
<td></td>
<td>200 KB per DB2 subsystem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 KB per element</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 KB per VTAM remote</td>
<td></td>
</tr>
</tbody>
</table>
Getting started

This chapter presents the following topics:

- Starting OPERTUNE ........................................... 41
- Using the OPERTUNE Main Selection Menu ...................... 42
- Selecting a host OPERTUNE .................................. 42
- Selecting a target OPERTUNE and subsystem .................. 44
- Stopping OPERTUNE .......................................... 46

Starting OPERTUNE

Use the following command to start OPERTUNE:

```
S opertuneProc,SYS=opertuneID,HLQ1="HLQ1",HLQ2="HLQ2"
```

- `opertuneProc` is the name of the OPERTUNE procedure in your proclib
- `opertuneID` is the name of the OPERTUNE you are starting
- `HLQ1` is the high-level qualifier of the OPERTUNE load library
- `HLQ2` is the high-level qualifier of the OPERTUNE profile data set

OPERTUNE also can be started as a batch job by coding the equivalent JCL statements in a batch job stream as follows:

```
//OPERTUNE EXEC opertuneProc,SYS=opertuneID,HLQ1="HLQ1",HLQ2="HLQ2"
```

For complete details on the START command, see “Start and stop commands” on page 382.
Using the OPERTUNE Main Selection Menu

When you first access OPERTUNE, the Main Selection Menu (Figure 5) is displayed. This menu gives you control over the main functions of OPERTUNE. From this menu you can select a host and target OPERTUNE and select a target subsystem.

Figure 5  Main Selection Menu

Selecting a host OPERTUNE

Once you have started OPERTUNE, you must select a host OPERTUNE, a target OPERTUNE, and a target subsystem.

Before you begin

You should read the information in “OPERTUNE administration” on page 37 before you select a host and target OPERTUNE.
To select a host OPERTUNE

1 To open the Host OPERTUNE Selection panel, perform one of the following actions:
   - Type HOST on the Command line and press Enter.
   - Select the Administrative/Utilities option from the Main Selection Menu, and select the Host OPERTUNE selection option from the Administrative/Utilities Menu.

   Figure 6  Host OPERTUNE Selection panel

   The Host OPERTUNE Selection panel is also displayed when the OPERTUNE dialog finds more than one host OPERTUNE system running on the current MVS.

2 To select an OPERTUNE as the host, type S in the Act field and press Enter.

   If you are unable to select a host OPERTUNE, type CANCEL or CAN on the Command line and press Enter to exit. Then ensure that you have an entry in the AUTHPGM section of the IKJTSOxx member for the DDTTAUTH program.
Selecting a target OPERTUNE and subsystem

The first time you start an OPERTUNE session, no target OPERTUNE is selected. Without a target OPERTUNE selected, you can perform administrative functions, such as adding and modifying profiles when the OPERTUNE system is not running. All profile requests are performed in the user address space instead of passing the requests to OPERTUNE. You are not permitted to issue OPERTUNE commands when there is no target OPERTUNE selected.

When you select a primary target OPERTUNE, it becomes the default target each time you bring up your OPERTUNE system, until a new primary target OPERTUNE is selected.

To select a target OPERTUNE

1. To open the Target OPERTUNE Selection panel, perform one of the following actions:
   - Type OPERTUNE on the Command line and press Enter.
   - Select the Administrative/Utilities option from the Main Selection Menu, and then select the Target OPERTUNE selection option from the Administrative/Utilities Menu.

2. Select a primary target or secondary target OPERTUNE as follows:

   The following information about each OPERTUNE system is included in the selection list: the OPERTUNE name, the version number, and the system name. The Authorization field indicates whether you are authorized to access the associated OPERTUNE.
To select a primary target OPERTUNE, type P in the Act field for the desired OPERTUNE and press Enter.

To select a secondary target OPERTUNE, type S in the Act field for the desired OPERTUNE and press Enter.

The names of the target OPERTUNE and the target subsystem are displayed in the top left corner of the screen.

If you are unable to select a target OPERTUNE, type CANCEL on the Command line and press Enter to exit. Ensure that you have an entry in the AUTHPGM section of the IKJTSOxx member for the DDTTAUTH program.

To select a target subsystem

1. To access the Target Subsystem Selection panel, perform one of the following actions:
   - Type SUBSYSTEM on the Command line and press Enter.
   - Select the Administrative/Utilities option from the Main Selection Menu, and select the Target subsystem selection option from the Administrative/Utilities Menu.

---

Figure 8  Target Subsystem Selection panel

<table>
<thead>
<tr>
<th>Name</th>
<th>DSGroup</th>
<th>Type</th>
<th>Rel Src</th>
<th>OPERTUNE MVS</th>
<th>Auth Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBAC</td>
<td>DB2</td>
<td>710</td>
<td>*DBAC</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DBDC</td>
<td>DB2</td>
<td>810</td>
<td>*DBDC</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEAE</td>
<td>DB2</td>
<td>610</td>
<td>*DEAE</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEAH</td>
<td>DB2</td>
<td>610</td>
<td>*DEAH</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEBA</td>
<td>DB2</td>
<td>710</td>
<td>*DEBA</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEBF</td>
<td>DB2</td>
<td>710</td>
<td>*DEBF</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEBH</td>
<td>DB2</td>
<td>710</td>
<td>*DEBH</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DECH</td>
<td>DB2</td>
<td>810</td>
<td>*DECH</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEC1</td>
<td>DB2</td>
<td>810</td>
<td>*DEC1</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEC2</td>
<td>DB2</td>
<td>810</td>
<td>*DEC2</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DEDC</td>
<td>DB2</td>
<td>710</td>
<td>*DED2</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
<tr>
<td>DTST</td>
<td>DB2</td>
<td>810</td>
<td>*DTST</td>
<td>OPRX DB2A</td>
<td>Y</td>
</tr>
</tbody>
</table>
Stopping OPERTUNE

The panel displays information about each subsystem, including subsystem ID, release level, and status (UP, DOWN, UNSUPPORTED). The Auth field indicates whether you are authorized to access the associated subsystem.

2 Select a target primary or secondary subsystem by performing one of the following actions:

- To select a target subsystem, type **P** in the Act field for the desired subsystem and press Enter.
- To select a secondary target subsystem, type **S** in the Act field for the desired subsystem and press Enter.

If you are unable to select a target subsystem, type **CANCEL** on the Command line and press Enter to exit. Then, ensure that you have an entry in the AUTHPGM section of the IKJTSOxx member for the DDTAUTH program.

The name of the target OPERTUNE followed by the name of the target subsystem is displayed in the top left corner of the screen. Figure 8 on page 45 shows a target OPERTUNE of OPRX and a target subsystem of DBDC.

**Stopping OPERTUNE**

Type the following command on the Command line to stop OPERTUNE:

```
P opertuneID
```

*opertuneID* is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job).

For complete details on the STOP command, see “Start and stop commands” on page 382.
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<thead>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACHEDYN</td>
<td>Cache dynamic SQL</td>
</tr>
<tr>
<td>CATTBUPD</td>
<td>Catalog table update</td>
</tr>
<tr>
<td>CDSSRDEF</td>
<td>Current degree special register</td>
</tr>
<tr>
<td>CHGDC</td>
<td>Change data capture</td>
</tr>
<tr>
<td>CHKPTFRQ</td>
<td>Checkpoint frequency</td>
</tr>
<tr>
<td>COMAXPAG</td>
<td>Maximum pages castout</td>
</tr>
<tr>
<td>CONTSTOR</td>
<td>Free unused thread storage</td>
</tr>
<tr>
<td>COORDNTR</td>
<td>Coordinate parallel processing</td>
</tr>
<tr>
<td>CORVRSTH</td>
<td>Castout reverse threshold</td>
</tr>
<tr>
<td>COTIMINT</td>
<td>Castout timer interval</td>
</tr>
<tr>
<td>DBACRVW</td>
<td>DBADM create view</td>
</tr>
<tr>
<td>DBPROTCL</td>
<td>Default DBPROTOCOL bind option</td>
</tr>
<tr>
<td>DDFINTV</td>
<td>DDF interval cycle frequency</td>
</tr>
<tr>
<td>DDFQCTM</td>
<td>DDF queued conversation time</td>
</tr>
<tr>
<td>DDFRBS</td>
<td>DDF receive buffer size</td>
</tr>
<tr>
<td>DEFID</td>
<td>DB2 default system user ID</td>
</tr>
<tr>
<td>DESCSTAT</td>
<td>Build DESCRIBE data</td>
</tr>
<tr>
<td>DISABSCL</td>
<td>Disable scrollable cursor messages</td>
</tr>
<tr>
<td>DLDFREQ</td>
<td>Down-level detect frequency</td>
</tr>
<tr>
<td>DLITOUT</td>
<td>IMS/DLI region timeout factor</td>
</tr>
<tr>
<td>DSSTIME</td>
<td>Data set statistics reset time</td>
</tr>
<tr>
<td>DSVCI</td>
<td>Variable VSAM control intervals</td>
</tr>
<tr>
<td>DUALARC</td>
<td>Dual log archiving switch</td>
</tr>
<tr>
<td>EDMMBFIT</td>
<td>Free chain search algorithm</td>
</tr>
<tr>
<td>EDMDBDC</td>
<td>EDM pool DBD cache size</td>
</tr>
<tr>
<td>EDMDSPAC</td>
<td>EDM pool data space size limit</td>
</tr>
<tr>
<td>EDMPOOL</td>
<td>EDM pool size</td>
</tr>
<tr>
<td>EDMSKPOL</td>
<td>EDM skeleton pool size</td>
</tr>
<tr>
<td>EDMSTMTC</td>
<td>EDM pool statement cache size</td>
</tr>
<tr>
<td>EDPROP</td>
<td>Enable data propagation</td>
</tr>
<tr>
<td>EVALUNC</td>
<td>Evaluate uncommitted data</td>
</tr>
<tr>
<td>EXPLAIN+</td>
<td>Extended Explain generation</td>
</tr>
<tr>
<td>EXTRAREQ</td>
<td>Max extra DRDA query blocks - requester</td>
</tr>
<tr>
<td>EXTRASRV</td>
<td>Max extra DRDA query blocks - server</td>
</tr>
<tr>
<td>EXTSEC</td>
<td>Extended security</td>
</tr>
<tr>
<td>GBP</td>
<td>Group buffer pool parameters</td>
</tr>
<tr>
<td>IDTHTOIN</td>
<td>Idle thread timeout interval</td>
</tr>
<tr>
<td>IDXBPOOL</td>
<td>Default index buffer pool</td>
</tr>
<tr>
<td>IMMEDWRI</td>
<td>Immediate write indicator</td>
</tr>
<tr>
<td>IMPDSDEF</td>
<td>Define data sets</td>
</tr>
<tr>
<td>IMPTSCMP</td>
<td>Use data compression</td>
</tr>
<tr>
<td>IRLMECSA</td>
<td>Maximum CSA storage for IRLM</td>
</tr>
<tr>
<td>IXQTY</td>
<td>Index space allocation</td>
</tr>
<tr>
<td>LOBVALA</td>
<td>User LOB storage limit</td>
</tr>
<tr>
<td>LOBVALS</td>
<td>System LOB storage limit</td>
</tr>
<tr>
<td>LOGAPSTG</td>
<td>Maximum storage for fast log apply</td>
</tr>
<tr>
<td>LOGTHRSH</td>
<td>Log write threshold</td>
</tr>
<tr>
<td>LRDRTHLD</td>
<td>Long runner reader warning time</td>
</tr>
<tr>
<td>MAINTYPE</td>
<td>Default current table types</td>
</tr>
<tr>
<td>MAXDSN</td>
<td>Maximum number of open data sets</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>MAXKEEPD</td>
<td>KEEP_DYNAMIC SQL save limit</td>
</tr>
<tr>
<td>MAXLOCKS</td>
<td>Maximum number of locks</td>
</tr>
<tr>
<td>MAXOFILR</td>
<td>Maximum open file references</td>
</tr>
<tr>
<td>MAXTEMPS</td>
<td>Maximum temporary space</td>
</tr>
<tr>
<td>MAXTHDS</td>
<td>Maximum number of threads</td>
</tr>
<tr>
<td>MAXTYPE1</td>
<td>Maximum Type1 inactive threads</td>
</tr>
<tr>
<td>MAXZDES</td>
<td>Maximum ZIVLEMP dictionary entries</td>
</tr>
<tr>
<td>MGEXTSZ</td>
<td>Manage extent size</td>
</tr>
<tr>
<td>MINDVSCL</td>
<td>Minimum scale for decimal division</td>
</tr>
<tr>
<td>MINSTOR</td>
<td>Actively manage thread storage</td>
</tr>
<tr>
<td>MSGLIMIT</td>
<td>DISPLAY Command message limit</td>
</tr>
<tr>
<td>MXDTCACH</td>
<td>Data caching memory</td>
</tr>
<tr>
<td>MXNUMCUR</td>
<td>Maximum open cursors</td>
</tr>
<tr>
<td>MXPKGOPS</td>
<td>Maximum concurrent package operations</td>
</tr>
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<td>MXSTPROC</td>
<td>Maximum stored procs</td>
</tr>
<tr>
<td>NPGTHRSH</td>
<td>NPAGE threshold</td>
</tr>
<tr>
<td>OJPERFEH</td>
<td>Outer join performance enhancements</td>
</tr>
<tr>
<td>OPTHINTS</td>
<td>Optimization hints</td>
</tr>
<tr>
<td>OUTBUFF</td>
<td>Output log buffer size</td>
</tr>
<tr>
<td>PADIX</td>
<td>Pad new indexes</td>
</tr>
<tr>
<td>PARAMDEG</td>
<td>Maximum parallelism degree</td>
</tr>
<tr>
<td>PARTKEYU</td>
<td>Allow update of partition keys</td>
</tr>
<tr>
<td>PCLOSE</td>
<td>Pseudo close interval</td>
</tr>
<tr>
<td>PFBP</td>
<td>Buffer pool prefetch value</td>
</tr>
<tr>
<td>PKGLDTOL</td>
<td>Tolerate package not found</td>
</tr>
<tr>
<td>PLANMGMT</td>
<td>Type of plan management</td>
</tr>
<tr>
<td>POOLINAC</td>
<td>Pool thread timeout</td>
</tr>
<tr>
<td>PTASKROL</td>
<td>Roll up parallel task accounting trace</td>
</tr>
<tr>
<td>QUIESCE</td>
<td>Archive log quiesce period</td>
</tr>
<tr>
<td>REATP</td>
<td>Archive log tape units</td>
</tr>
<tr>
<td>RECALL</td>
<td>Automatic HSM recall switch</td>
</tr>
<tr>
<td>RECALLTM</td>
<td>HSM recall delay</td>
</tr>
<tr>
<td>REFSHAGE</td>
<td>Default current refresh age</td>
</tr>
<tr>
<td>RELCURHL</td>
<td>Release locks for cursor</td>
</tr>
<tr>
<td>RESTTPUN</td>
<td>Restore tape units</td>
</tr>
<tr>
<td>RESYNC</td>
<td>DDF resync interval</td>
</tr>
<tr>
<td>RETLWAIT</td>
<td>Retained lock timeout multiplier</td>
</tr>
<tr>
<td>RETVLCFK</td>
<td>Retrieve variable data from index key</td>
</tr>
<tr>
<td>RIDBLKS</td>
<td>Max RID block</td>
</tr>
<tr>
<td>RIDPOOL</td>
<td>RID pool size</td>
</tr>
<tr>
<td>RLFAUTH</td>
<td>AUTHID for RLF tables</td>
</tr>
<tr>
<td>RLFERR</td>
<td>RLF error action</td>
</tr>
<tr>
<td>RLFERRD</td>
<td>RLF remote error action</td>
</tr>
<tr>
<td>RLIMIT</td>
<td>Resource limit facility</td>
</tr>
<tr>
<td>RRFMDMP</td>
<td>Restore/recover from dump</td>
</tr>
<tr>
<td>RRULOCK</td>
<td>Use U lock for repeatable reads</td>
</tr>
<tr>
<td>SARGSSWRP</td>
<td>Index access for sideways reference predicate</td>
</tr>
<tr>
<td>SEQCACH</td>
<td>3990 cache mode</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>SEQPRES</td>
<td>Utility cache</td>
</tr>
<tr>
<td>SITETYPE</td>
<td>Site type</td>
</tr>
<tr>
<td>SJMXPOOL</td>
<td>Starjoin memory pool</td>
</tr>
<tr>
<td>SJTABLES</td>
<td>Star join table threshold</td>
</tr>
<tr>
<td>SKIPUNCI</td>
<td>Ignore uncommitted inserts</td>
</tr>
<tr>
<td>SMF89</td>
<td>Measured usage tracking</td>
</tr>
<tr>
<td>SMSDCFL</td>
<td>SMS dataclass for files</td>
</tr>
<tr>
<td>SMSDCIX</td>
<td>SMS dataclass for indexes</td>
</tr>
<tr>
<td>SORTPOOL</td>
<td>Sort pool size</td>
</tr>
<tr>
<td>STARJOIN</td>
<td>Starjoin enablement/ratio</td>
</tr>
<tr>
<td>STATCLUS</td>
<td>Clustering statistics</td>
</tr>
<tr>
<td>STATFREQ</td>
<td>Statistics time interval</td>
</tr>
<tr>
<td>STATHIST</td>
<td>Collection of statistics history</td>
</tr>
<tr>
<td>STATROLL</td>
<td>Aggregate partition statistics</td>
</tr>
<tr>
<td>STATSINT</td>
<td>RTS statistics timer interval</td>
</tr>
<tr>
<td>STORMXAB</td>
<td>Stored procedure maximum abends</td>
</tr>
<tr>
<td>STORPROC</td>
<td>Stored procedure MVS procedure name</td>
</tr>
<tr>
<td>STORTIME</td>
<td>Stored procedure timeout value</td>
</tr>
<tr>
<td>SUPERRS</td>
<td>Suppress logrec recording</td>
</tr>
<tr>
<td>MXPKGOPS</td>
<td>Maximum concurrent package operations</td>
</tr>
<tr>
<td>SYNCVAL</td>
<td>Synchronize DB2 statistics</td>
</tr>
<tr>
<td>SYSADM</td>
<td>Installation SYSADM IDs</td>
</tr>
<tr>
<td>SYSLVBK</td>
<td>System-level backups</td>
</tr>
<tr>
<td>SYSOPR</td>
<td>Installation SYSOPR IDs</td>
</tr>
<tr>
<td>TBSBP8K</td>
<td>Default 8 KB buffer pool</td>
</tr>
<tr>
<td>TBSBP16K</td>
<td>Default 16 KB buffer pool</td>
</tr>
<tr>
<td>TBSBP32K</td>
<td>Default 32 KB buffer pool</td>
</tr>
<tr>
<td>TBSBPLOB</td>
<td>Default LOB buffer pool</td>
</tr>
<tr>
<td>TBSBPOOL</td>
<td>Default table space buffer pool</td>
</tr>
<tr>
<td>TBSBPXML</td>
<td>Default XML buffer pool</td>
</tr>
<tr>
<td>TCPALVER</td>
<td>Accept TCP requests</td>
</tr>
<tr>
<td>TCPKPALV</td>
<td>TCP/IP stack keepalive value</td>
</tr>
<tr>
<td>TIMEOUT</td>
<td>Lock timeout interval</td>
</tr>
<tr>
<td>TSQTY</td>
<td>Table space allocation</td>
</tr>
<tr>
<td>UIFCIDS</td>
<td>Unicode on IFC records</td>
</tr>
<tr>
<td>UNCOLNM7</td>
<td>UNION column name</td>
</tr>
<tr>
<td>URCHKKTH</td>
<td>UR checkpoint cycle warn threshold</td>
</tr>
<tr>
<td>URLGWH</td>
<td>UR log records before warning</td>
</tr>
<tr>
<td>UTDUCLNM</td>
<td>Dump class name</td>
</tr>
<tr>
<td>UTIMOUT</td>
<td>Utility timeout multiplier</td>
</tr>
<tr>
<td>VOLTDEVT</td>
<td>Utility temp unit/device</td>
</tr>
<tr>
<td>WLMENV</td>
<td>Default WLM environment</td>
</tr>
<tr>
<td>XLKUPDLT</td>
<td>Use X locks for searched updates</td>
</tr>
<tr>
<td>XMLVALA</td>
<td>XML user storage limit</td>
</tr>
<tr>
<td>XMLVALS</td>
<td>XML system storage limit</td>
</tr>
</tbody>
</table>
Element command overview

Each element on the Element Selection panel corresponds to one or more changeable items in a DB2 subsystem. With OPERTUNE, you can make immediate modifications to a ZPARM value without cycling the subsystem.

Before you begin

Before using any of the OPERTUNE elements, you must

- specify a valid target OPERTUNE and a valid DB2 subsystem or data sharing group (see “Selecting a target OPERTUNE and subsystem” on page 44)
- ensure that you have the proper authority to execute the command (see Chapter 8, “OPERTUNE security”)

To access the element commands

1. Select the Subsystem parameters (ZPARMS) option from the Main Selection Menu to display the Element Selection panel.

Figure 9   Element Selection panel

<table>
<thead>
<tr>
<th>Command</th>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>..</td>
<td>ABIND</td>
<td>ENABLE AUTOMATIC REBIND</td>
</tr>
<tr>
<td>..</td>
<td>ACCESS</td>
<td>DB2 ACCESS MODE</td>
</tr>
<tr>
<td>..</td>
<td>ARCALLOC</td>
<td>ARCHIVE ALLOCATION CONTROL</td>
</tr>
<tr>
<td>..</td>
<td>ARCBKLSZ</td>
<td>ARCHIVE DATA SETS BLOCK SIZE</td>
</tr>
<tr>
<td>..</td>
<td>ARCBSDS</td>
<td># OF ARCHIVE DATA SETS IN BSDS</td>
</tr>
<tr>
<td>..</td>
<td>ARCCATLG</td>
<td>ARCHIVE CATALOG PARAMETER</td>
</tr>
<tr>
<td>..</td>
<td>ARCCOMP</td>
<td>ARCHIVE LOG COMPRESSION</td>
</tr>
<tr>
<td>..</td>
<td>ARCHIVE</td>
<td>LOG ARCHIVING SWITCH</td>
</tr>
<tr>
<td>..</td>
<td>ARCPREF</td>
<td>ARCHIVE DATA SET PREFIXES</td>
</tr>
<tr>
<td>..</td>
<td>ARCPRT</td>
<td>ARCHIVE LOG SECURITY PROTECTION</td>
</tr>
<tr>
<td>..</td>
<td>ARCRETN</td>
<td>ARCHIVE RETENTION PERIOD</td>
</tr>
<tr>
<td>..</td>
<td>ARCTSTMP</td>
<td>ARCHIVE TIMESTAMP OPTION</td>
</tr>
<tr>
<td>..</td>
<td>ARCUNIT</td>
<td>ARCHIVE UNIT</td>
</tr>
<tr>
<td>..</td>
<td>ARCTOR</td>
<td>ARCHIVE WTOR PARAMETER</td>
</tr>
<tr>
<td>..</td>
<td>ARCT2RX</td>
<td>REQUEST COPY2 ARCHIVE LOGS</td>
</tr>
<tr>
<td>..</td>
<td>ASSIST</td>
<td>ASSIST PARALLEL PROCESSING</td>
</tr>
<tr>
<td>..</td>
<td>AUTHCACH</td>
<td>AUTHORIZATION CACHE SIZE</td>
</tr>
</tbody>
</table>

Figure 9   Element Selection panel
Select one or more elements by typing any of the following line commands next to the elements and pressing Enter:

- Q to build a QUERY command
- R to build a RESET command
- S to build a SET command
- SN to build a SET command with the NORESET option

**NOTE**
If you request a RESET for an element that cannot be reset (for example, EDMPOOL), OPERTUNE redisplay the selection list with that element at the top of the panel and places an asterisk (*) in the select field. You must make a new selection or replace the asterisk with a blank.

**Element command execution**

When you select an element to SET or QUERY, OPERTUNE builds the command and displays a confirmation panel (Figure 10).

**Figure 10    Command Confirmation panel**

![Command Confirmation Panel](image)

You can also use the EDIT command to invoke an ISPF edit session to make changes to an element command.
If confirmed, each command is issued to the target OPERTUNE or subsystem, and the OPERTUNE Command Response Display panel (Figure 11) is displayed.

**Figure 11  OPERTUNE Command Response Display panel**

<table>
<thead>
<tr>
<th>DDTG DBII Command Response Display</th>
<th>Row 1 of 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command ===&gt; ____________________</td>
<td>SCROLL ===&gt; PAGE</td>
</tr>
</tbody>
</table>

Review the response messages below. Commands: FIND
To exit, type End and press Enter.

Response Messages
IN(DBGA) SET ARCBSDS(900)
BMC31164I DDTAPPLA DB2A IN(DBGA) SET ARCBSDS(900)
BMC31531I DDTAPPLA DB2A # OF ARCHIVE DATA SETS IN BSDS CHANGED FROM 800 TO 900
BMC31516I DDTAPPLA DB2A SET COMMAND PROCESSING COMPLETE

IN(DBGA) SET ARCRETN(20)
BMC31164I DDTAPPLA DB2A IN(DBGA) SET ARCRETN(20)
BMC31531I DDTAPPLA DB2A ARCHIVE RETENTION PERIOD CHANGED FROM 7 TO 20
BMC31516I DDTAPPLA DB2A SET COMMAND PROCESSING COMPLETE

The first command that was issued is listed first on the panel, followed by the messages that were issued in response to the command. You can scroll through the list or use the FIND command to locate a specific command or message.

**NOTE**

RFIND is not supported, but you can use FIND, then scroll and repeat the FIND command.

**Effects of the element commands**

The QUERY command shows the current status of an element. If OPERTUNE has modified the element, the original ZPARM value is also shown. If OPERTUNE did not modify the element, the query returns the current value and indicates that the element is not modified.

The SET command allows you to specify a new value for an element. When you stop OPERTUNE, elements changed with the SET command are reset to their original ZPARM values. Some elements, such as ARCALLOC or BP, have multiple fields that you can modify. If you leave a field blank, it remains unchanged.
Normally, elements that you changed with a SET command return to their ZPARM values when OPERTUNE is cycled. When you use the NORESET option, OPERTUNE does not reset the ZPARM value. As shown in Figure 12, when you stop OPERTUNE, elements that have been changed with the NORESET option are not returned to their original ZPARM values.

Figure 12  Effects of the NORESET option on ZPARM values

RESET returns an element to its group value, or to its original ZPARM value if no group value exists. See “Element command precedence” on page 55 for more information on the effects of a RESET command.

NOTE
A SET or RESET command that is issued while the subsystem is down is queued and takes effect when the subsystem restarts.

When you use OPERTUNE to change an element, the change is maintained when DB2 cycles. However, DB2 initially starts with the unchanged ZPARM values. After DB2 startup, OPERTUNE changes the element values, based on any groups, schedules, and individual element commands that were issued.

For example, if you use OPERTUNE to set ARCRETN to 9, and DB2 shuts down, OPERTUNE will reset ARCRETN to 9 after DB2 starts. Figure 13 shows the values of ARCRETN over time.

Figure 13  Changes to element values when DB2 cycles
Element command overview

**NOTE**

During the restart of DB2, before changes made with OPERTUNE have been reapplied, the ZPARM values are still in effect. Although a restart of DB2 has little or no effect on most elements, it could result in an archive failure for the archive elements.

OPERTUNE’s purpose is to make dynamic changes without stopping DB2. Changes you want to make permanent should be made to the ZPARM values the next time you recycle DB2.

Element command precedence

Individual element commands can be grouped and scheduled to allow you to schedule a command or group of commands to be issued at a particular time (for example, day shift, night shift). Individual element commands always override group or schedule commands.

For example, ARCBSDS is set to 900 with a SET command and has been set to 800 as part of a command group. Despite the chronological order of the SET commands, the value of ARCBSDS is 900 because the individual SET command overrides the command group.

If you change an element’s value and then issue a RESET command for that element, OPERTUNE returns the element to its group value. If the element was not set in any group, then OPERTUNE resets it to its original ZPARM value.

**Figure 14** and **Figure 15** show the effects of group and individual SET and RESET commands. Despite the order of the two SET commands, the value of ARCBSDS is 900 when the first RESET is issued.

**Figure 14** shows that if you reset the group first, the value of ARCBSDS remains unchanged, because the individual element SET overrides the group setting.

**Figure 14** Changes to element values when the group is reset first

<table>
<thead>
<tr>
<th>Events</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET ARCBSDS individually to 900</td>
<td>ARCBSDS = 900</td>
</tr>
<tr>
<td>SET ARCBSDS to 800 as part of a command group</td>
<td>ARCBSDS = 900</td>
</tr>
<tr>
<td>RESET the command group</td>
<td>ARCBSDS = 900</td>
</tr>
<tr>
<td>RESET the ARCBSDS element</td>
<td>ARCBSDS = ZPARM value</td>
</tr>
</tbody>
</table>

**Figure 15** shows the effects of resetting the element first. ARCBSDS is returned to its group value of 800. When the group is then reset, ARCBSDS returns to its ZPARM value.
Element command syntax

You can bypass the OPERTUNE ISPF dialog and make modifications by submitting commands directly from the console or you can use the Free Form Command panel to issue commands, bypassing the element dialogs. The descriptions of the individual elements provide additional information specific to each element, such as parameter sequence and valid values. Unless otherwise indicated, the syntax diagrams show the syntax generated by the element dialogs which is the same syntax you specify on the Free Form Command panel.

Use the following syntax to issue SET, RESET, and QUERY commands from the console by using the MODIFY command:

```
F opertuneID,IN(DB2ssid) command
```

Use the following syntax to issue SET, RESET, and QUERY commands from the Free Form Command panel:

```
IN(DB2ssid@opertuneID) command
```

- **DB2ssid** is the subsystem ID of the DB2 to which the command applies.
- **opertuneID** is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job).
- **command** is the SET, RESET, or QUERY command.

**SET command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET  element  ( -value-)  [NORESET]
```
## RESET command syntax and parameters

```
  IN(DB2ssid@opertuneID)  RESET  element
```

### Value Description

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>element</td>
<td>The element name</td>
</tr>
<tr>
<td>value</td>
<td>A numerical value expressed in one of the following ways:</td>
</tr>
<tr>
<td></td>
<td>■ absolute numbers (1000)</td>
</tr>
<tr>
<td></td>
<td>■ delta numbers (+500) (-500)</td>
</tr>
<tr>
<td></td>
<td>■ delta percentages (+50%) (-50%)</td>
</tr>
</tbody>
</table>

### NORESET

The changes you request remain in effect until the DB2 subsystem is cycled.

## QUERY command syntax and parameters

```
  IN(DB2ssid@opertuneID)  QUERY  element
```

### Value Description

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>element</td>
<td>The element name</td>
</tr>
</tbody>
</table>
Saving element changes

Cycling OPERTUNE resets elements that have been changed back to their ZPARM values. To retain a specific set of subsystem modifications, you can use one of the following methods:

- Use the SHUTDOWN NORESET command to bring OPERTUNE down without resetting the changes.

- Include the modifications in a group, and specify the group in a schedule. Include this schedule in the Initial Commands section of the OPERTUNE system profile, to be activated at OPERTUNE initialization. This procedure ensures that the subsystem environment you create with OPERTUNE will be saved if OPERTUNE is recycled.

For more information about group profiles, see Chapter 5, “Group profiles.” For more information about schedule profiles, see Chapter 6, “Schedule profiles.”

- Specify the NORESET option on the SET commands to cause the changes you have requested to remain in effect even if OPERTUNE is cycled. These changes remain in effect until the DB2 subsystem is cycled.

**WARNING**

Any changes you make to a DB2 subsystem with OPERTUNE will be reset when OPERTUNE is recycled if you do not use any of these methods.
CURRENT command

The CURRENT command (Figure 16) populates the input fields of an element’s panel with the current values for the element. Issue the command at the command prompt of the element panel.

You can also issue the CURRENT command while editing a group profile to return all element values that were modified by OPERTUNE. Issuing the command allows you to build a command group based on the current modifications.

Figure 16  Using the CURRENT command

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>VPSIZE</th>
<th>MAXSIZE</th>
<th>HPSIZE</th>
<th>VPSEQT</th>
<th>VPPSEQT</th>
<th>HPSEQT</th>
<th>DWQT</th>
<th>VDWQT</th>
<th>CASTOUT</th>
<th>VPXPSEQT</th>
<th>VPTYPE</th>
<th>PGSTEAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENT</td>
<td>CURRENT VALUES RETURNED</td>
<td>0 (0 - 400000 or delta)</td>
<td>(** - N/A or delta)</td>
<td>0 (0 - 2097152 or delta)</td>
<td>80 (0 - 100 or delta)</td>
<td>50 (0 - 100 or delta)</td>
<td>80 (0 - 100 or delta)</td>
<td>50 (0 - 90 or delta)</td>
<td>10 (0 - 90 or delta)</td>
<td>Y (Y / N)</td>
<td>0 (0 - 100 or delta)</td>
<td>PRIMARY (PRIMARY or DATASPACE)</td>
<td>LRU (LRU or FIFO)</td>
</tr>
</tbody>
</table>

Element descriptions

The following sections describe each OPERTUNE element command in detail. A cross-reference to the corresponding DB2 parameters is also included. Use this reference to consult the appropriate IBM manual for further explanation of the different input fields.
ABEXP—Explain during auto rebind

Use the Modify Explain During Auto Rebind panel (Figure 17) or the ABEXP command to specify whether Explain processing occurs during automatic rebind of a plan or package. Explain processing can occur only if the bind option EXPLAIN(YES) is specified.

Figure 17  Modify Explain During Auto Rebind panel

Use the MODIFY command or the ABEXP command to specify whether Explain processing occurs during automatic rebind of a plan or package. Exhibit 17 shows the MODIFY command.

Command syntax and parameters

Command: CURRENT

Description . . . . . . . . : EXPLAIN DURING AUTO REBIND

Type the new explain during auto rebind indicator you wish to change to. Then Press Enter.

Explain during auto rebind indicator

Enable explain/auto rebind . Y (Y or N)

SET ABEXP

Y (Y or N)

NORESET

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable explain/auto rebind</td>
<td>DSNTIPO</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>ABEXP</td>
</tr>
</tbody>
</table>
ABIND—Enable automatic rebind

Use the Modify Automatic Rebind panel (Figure 18) or the ABIND command to specify whether plans and packages are automatically rebound. To reduce the overhead and catalog contention that is occurring during peak periods, you can change ABIND to NO.

**Figure 18  Modify Automatic Rebind panel**

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td>Plans and packages are automatically rebound at execution time when a plan or package</td>
</tr>
<tr>
<td></td>
<td>■ is “invalid” (the SYSPLAN or SYSPACKAGE VALID column is N)</td>
</tr>
<tr>
<td></td>
<td>■ was last bound on DB2 v9, but is now running on a previous version)</td>
</tr>
<tr>
<td></td>
<td>■ was last autobound on a previous version of DB2, but is now running on v9</td>
</tr>
<tr>
<td></td>
<td>■ was last bound on DB2 version 8, but is now running on a previous version)</td>
</tr>
<tr>
<td></td>
<td>■ was last autobound on a previous version of DB2, but is now running on version 8</td>
</tr>
<tr>
<td></td>
<td>YES is the DB2 default.</td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td>Plans and packages are not automatically rebound under any circumstances</td>
</tr>
<tr>
<td></td>
<td>Using this option reduces overhead and catalog contention that may occur during peak periods.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebind Indicator</td>
<td>DSNTIPO</td>
<td>ABIND</td>
<td>DSN6SPRM</td>
<td>ABIND</td>
</tr>
</tbody>
</table>
ACCESS—DB2 access mode

Use the Modify Access Mode panel (Figure 19) to dynamically switch from maintenance access mode or production mode access mode to the other without cycling DB2. In MAINT mode, new attempts to create connections are denied, while existing threads are allowed to complete.

Figure 19  Modify Access Mode panel

After OPERTUNE changes the access mode to MAINT, all IMS control region connections should be relinquished by using the IMS /STOP SUBSYSTEM command. As a result, no new IMS connections or threads are established. CICS subsystem connections should be removed with the CICS DSNC STOP command to prevent subsequent CICS connections or threads from being established.

For more information, refer to the ACCESS parameter for the START DB2 command in the appropriate IBM manual.

NOTE

This modification is subject to OPERTUNE security checking. Only authorized OPERTUNE systems and users are allowed to perform ACCESS modification.

Command syntax and parameters

IN(DB2ssid@opertuneID)  SET ACCESS (MAINT) NORESET

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>*</td>
<td>Switch to production mode.</td>
</tr>
<tr>
<td>MAINT</td>
<td>Switch to maintenance mode.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode specification</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>
ACCUMACC—DDF/RRSAF end user accounting

Use the Modify DDF/RRSAF End User Accounting panel (Figure 20) or the ACCUMACC command to specify whether the end user for DDF and RRSAF threads should accumulate DB2 accounting data.

**Figure 20  Modify DDF/RRSAF End User Accounting panel**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET ACCUMACC (NO Value) NORESET</td>
<td></td>
</tr>
</tbody>
</table>

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET ACCUMACC (NO value) NORESET
```

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| NO       | DB2 writes an accounting record when either of the following actions occurs:  
  - a DDF thread is made inactive  
  - signon occurs for an RRSAF thread |
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulate indicator</td>
<td>DSNTIPN</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>ACCUMACC</td>
</tr>
</tbody>
</table>
ACCUMUID—DDF/RRSAF aggregation fields

Use the Modify DDF/RRSAF Accounting Aggregation Fields panel (Figure 21) or the ACCUMUID command to specify the aggregation fields that will be used for DDF and RRSAF accounting rollup.

Figure 21  Modify DDF/RRSAF Accounting Aggregation Fields panel

Command syntax and parameters

```plaintext
IN(DB2ssid@opertuneID) — SET ACCUMUID (value) (NORESET)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field type</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field type</td>
<td>DSNTIPN</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>ACCUMUID</td>
</tr>
</tbody>
</table>
AEXITLIM—DSNX@XAC abends

Use the Modify DSNX panel (Figure 22) or the AEXITLIM command to specify the number of ABENDS of the DB2 access control authorization exit routine that will be tolerated before the exit routine is shut down.

Figure 22  Modify DSNX panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Number of abends that the system will accept before the DB2 is automatically shut down. Specify a value between 0 and 32767. The DB2 default is 10.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auth exit limit</td>
<td>DSNTIPP</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>AEXITLIM</td>
</tr>
</tbody>
</table>
ARC2FRST—Request copy2 archive logs

Use the Modify Request COPY2 Archive Logs panel (Figure 23) or the ARC2FRST command to specify whether COPY2 archives are read first when the DB2 subsystem is started. Use this element to ensure that the copy 2 archive log data set is read first if the copy 1 archive log data set is unavailable.

**Figure 23  Modify Request Copy2 Archive Logs panel**

![Modify Request Copy2 Archive Logs panel]

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET ARC2FRST (Y N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Read the COPY2 archives first when the specified subsystem starts.</td>
</tr>
<tr>
<td>N</td>
<td>Read the COPY1 archives first when the specified subsystem starts.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>D5NTIPO</td>
<td>ARC2FRST</td>
<td>DSN6LOGP</td>
<td>ARC2FRST</td>
</tr>
</tbody>
</table>
ARCALLOC—Archive allocation control

Use the Modify Archive Data Sets Allocation Values panel (Figure 24) or the ARCALLOC command to specify new values for the primary and secondary allocation amounts and the allocation unit for the subsequent allocations of the archive log data sets.

Figure 24  Modify Archive Data Set Allocation Values panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>primary*</td>
<td>The primary allocation amount. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■ blank—the CLIST calculates the amount using block size and log size</td>
</tr>
<tr>
<td></td>
<td>■ a numerical value in the range 1 to 999999</td>
</tr>
<tr>
<td></td>
<td>■ a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values can be specified numerically (+nnn or -nnn) or as a percentage (+nn% or -nn%). The value specified must fall in the range 1–999999.</td>
</tr>
</tbody>
</table>
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary amount</td>
<td>DSNTIPA</td>
<td>none</td>
<td>DSN6ARVP</td>
<td>PRIQTV</td>
</tr>
<tr>
<td>Secondary amount</td>
<td>DSNTIPA</td>
<td>none</td>
<td>DSN6ARVP</td>
<td>SECQTY</td>
</tr>
<tr>
<td>Unit</td>
<td>DSNTIPA</td>
<td>none</td>
<td>DSN6ARVP</td>
<td>ALCUNIT</td>
</tr>
</tbody>
</table>

*At least one of primary, secondary, or the allocation unit must be specified.*
ARCBLKSZ—Archive data sets block size

Use the Modify Archive Data Sets Block Size panel (Figure 25) or the ARCBLKSZ command to specify a new value for the block size of archive log data sets. The new block size will be used in subsequent allocations of the archive log data sets.

Figure 25  Modify Archive Data Sets Block Size panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| blockSize | The block size. Specify one of the following values:  
  - kilobytes in the range 8K to 28K (must be a multiple of 4 KB)  
  - bytes in the range 8192B to 28672B (must be a multiple of 4096 bytes)  
  - delta value  
    Delta values can be specified numerically (+nnn or -nnn) or as a percentage (+nn% or -nn%). The value specified must fall between 8192 bytes and 28672 bytes in multiples of 4096.  
    The DB2 default is 24576. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>DSNTIPA</td>
<td>ARCHSIZE</td>
<td>DSN6ARVP</td>
<td>BLKSIZE</td>
</tr>
</tbody>
</table>
**ARCBSDS—Number of archive data sets in BSDS**

Use the Modify Number of Archive Data Sets Recorded in BSDS panel (Figure 26) or the ARCBSDS command to specify a new value for the maximum number of archive data sets that are recorded in the bootstrap data set (BSDS). The new value will be used in subsequent allocations of the archive log data sets. Using this element, you can dynamically change the number of archive data sets for critical, heavy DB2 workloads.

**NOTE**

The DB2 ARCHIVE ZPARM must be set to YES before you can modify the maximum number of archive data sets.

**Figure 26  Modify Number of Archive Data Sets Recorded in BSDS panel**

<table>
<thead>
<tr>
<th>Command: CURRENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: #: OF ARCHIVE DATA SETS IN BSDS</td>
</tr>
<tr>
<td>Type the new BSDS recording value that you wish to change to. Then press Enter.</td>
</tr>
<tr>
<td>Archive Data Set BSDS Recording Parameter</td>
</tr>
<tr>
<td>Number of entries: (10-10000 or delta)</td>
</tr>
</tbody>
</table>

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET ARCBSDS (--value--) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
ARCCATLG—Archive catalog parameter

Use the Modify Archive Catalog Indicator panel (Figure 27) or the ARCCATLG command to specify whether the subsystem archive log data sets are cataloged when they are created. If you have switched archiving from tape to DASD, DB2 will force the cataloging of archive log data sets even when the catalog parameter is turned off. You can eliminate the messages from DB2 about forced cataloging by using this element to dynamically turn on the archive catalog parameter.

NOTE

ARCCATLG applies only when tapes or cartridges are used for the archive logs.

### ARCCATLG—Archive catalog parameter

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of entries</td>
<td>DSNTIPA</td>
<td>ARCHMAXV</td>
<td>DSN6LOGP</td>
<td>MAXARCH</td>
</tr>
</tbody>
</table>

Value

The maximum number of archive data sets that can be recorded in the bootstrap data set. Specify one of the following values:

- a numerical value in the range 10–10000*
- a delta value
  Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 10–10000*.

The DB2 default is 1000.

NORESET

The changes you request remain in effect until the DB2 subsystem is cycled.

* For DB2 version 7.1, this range is 10–1000. The value of 10000 applies to DB2 version 8.1 only if the BSDS has been converted. The conversion process is run after DB2 is in new-function mode.
Figure 27  Modify Subsystem Archive Catalog Indicator panel

[Diagram of the Modify Subsystem Archive Catalog Indicator panel]

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET ARCCATLG  ( Y or N )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Catalog the subsystem archive log data sets when they are created.</td>
</tr>
<tr>
<td>N</td>
<td>Do not catalog the subsystem archive log data sets when they are created. This is the DB2 default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog archive logs</td>
<td>DSNTPA</td>
<td>ARCHCTLG</td>
<td>DSN6ARVP</td>
<td>CATALOG</td>
</tr>
</tbody>
</table>
ARCCOMP—Archive log compression

Use the Modify Subsystem Archive Log Compression panel (Figure 28) or the ARCCOMP command to enable or disable DB2 archive log compression. The new value takes effect the next time an archive tape is written. This element applies only to 3480 and 3490 devices with the improved data recording capability (IDRC).

Figure 28  Modify Subsystem Archive Log Compression panel

<table>
<thead>
<tr>
<th>Command syntax and parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN(DB2ssid@opertuneID) SET ARCCOMP (Y or N) NORESET</td>
</tr>
</tbody>
</table>

Table: DB2 parameter values

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Archive log compression is enabled</td>
</tr>
<tr>
<td>N</td>
<td>Archive log compression is disabled. This is the DB2 default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

Table: Field Installation panel CLIST parameter ZPARM macro ZPARM parameter

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIPA</td>
<td>ARCHCOMP</td>
<td>DSN6ARVP</td>
<td>COMPACT</td>
</tr>
</tbody>
</table>
ARCHIVE—Log archiving switch

Use the Modify Log Archiving Indicator panel (Figure 29) or the ARCHIVE command to turn DB2 log archiving on or off. When archiving is off, the subsystem switches active logs without off-loading them. The subsystem will be unable to recover a thread whose records are not contained in one of the active log data sets. When archiving is on, the new value is used the next time an active log data set is full. Use this element to turn off DB2 archiving if you have storage problems and recoverability of your DB2 workload is not critical. Once you have corrected the problem, use this element to turn archiving back on.

Figure 29  Modify Subsystem Log Archiving Indicator panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Log archiving is turned on</td>
</tr>
<tr>
<td>N</td>
<td>Log archiving is turned off (the subsystem switches active logs without off-loading them and will be unable to recover a thread whose records are not contained in one of the active log data sets).</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offload switch</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>
ARCPREF—Archive data set prefixes

Use the Modify Archive Data Set Prefixes panel (Figure 30) or the ARCPREF command to specify new values for the archive log data set prefixes. The new specified prefix is used at the next dynamic allocation of the archive data sets.

Figure 30  Modify Archive Data Set Prefix panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>prefix1</td>
<td>The new value for the archive log data set prefix1 (1–30 characters). The DB2 default in a non-data-sharing environment is DSNCAT.LOGCOPY1. The DB2 default in a data sharing environment is DSNCAT.DSN1.LOGCOPY1.</td>
</tr>
<tr>
<td>prefix2</td>
<td>The new value for the archive log data set prefix2 (1–30 characters). The DB2 default in a non-data-sharing environment is DSNCAT.LOGCOPY2. The DB2 default in a data sharing environment is DSNCAT.DSN1.LOGCOPY2.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix 1</td>
<td>DSNTIPH</td>
<td>ARCHPRE1</td>
<td>DSN6ARVP</td>
<td>ARCPFX1</td>
</tr>
<tr>
<td>Prefix 2</td>
<td>DSNTIPH</td>
<td>ARCHPRE2</td>
<td>DSN6ARVP</td>
<td>ARCPFX2</td>
</tr>
</tbody>
</table>
ARCPROT—Archive log security protection

Use the Modify Subsystem Archive Log Security panel (Figure 31) or the ARCPROT command to determine whether the archive log data sets will be RACF-protected. The new value takes effect with the next use of an archived log.

Use this element if recoveries are needed from archive logs, but RACF access to the archived logs is not available. You can temporarily disable protection checking to allow recoverability from archived logs. After the recoveries are finished, change the ARCPROT setting to Y to enforce RACF security checking.

**Figure 31  Modify Subsystem Archive Log Security panel**

```
DDTG DBI1      Modify Subsystem Archive Log Security
Command ===> _________________________________________________________________
Command: CURRENT
Description ......... : ARCHIVE LOG SECURITY PROTECTION
Type the new archive log security value that you wish to change to. Then press Enter.
Archive Log Security Parameter
   Enabled ............ ( Y or N )
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) — SET ARCPROT — ( Y | N ) — NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Protection checking is enabled (archive log data sets are RACF-protected).</td>
</tr>
<tr>
<td>N</td>
<td>Protection checking is disabled (archive log data sets are not RACF-protected).</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIPP</td>
<td>PROTARAC</td>
<td>DSN6ARVP</td>
<td>PROTECT</td>
</tr>
</tbody>
</table>
ARCRETN—Archive data set retention period

Use the Modify Archive Data Set Retention Period panel (Figure 32) or the ARCRETN command to specify a new value for the retention period of the archive log data sets. The new value is used at the next dynamic allocation of archive data sets.

Figure 32  Modify Archive Data Set Retention panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET ARCRETN (value) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The number of days to retain the archive data sets. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>a numerical value in the range 0–9999</td>
</tr>
<tr>
<td></td>
<td>a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–9999.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention period (days)</td>
<td>DSNTIPA</td>
<td>ARCRETN</td>
<td>DSN6ARVP</td>
<td>ARCRETN</td>
</tr>
</tbody>
</table>
ARCTSTMP—Archive timestamp indicator

Use the Modify Archive Timestamp Indicator panel (Figure 33) or the ARCTSTMP command to specify whether the archive log data set name will contain the log creation date and time as qualifiers. Even though the timestamp is not a part of the archive log data set names, the timestamp may be helpful for a set of disaster recovery archive logs.

Figure 33  Modify Archive Timestamp Indicator panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>YES</td>
<td>The archive log data set name will contain the log creation date and time as qualifiers in the format Dyyddd.Thhmmssst. If you specify YES, the archive log data set name prefixes must be less than or equal to 19 characters.</td>
</tr>
<tr>
<td>NO</td>
<td>The archive log data set name will not contain the log creation date and time as qualifiers.</td>
</tr>
<tr>
<td>EXT</td>
<td>The archive log data set name will contain the log creation date and time as qualifiers in the format Dyyddd.Thhmmssst. If you specify EXT, the archive log data set name prefixes must be less than or equal to 17 characters.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use timestamp in name</td>
<td>DSNTIPH</td>
<td>ARCHTS</td>
<td>DSN6ARVP</td>
<td>TSTAMP</td>
</tr>
</tbody>
</table>

**ARCUNIT—Archive unit**

Use the Modify Archive Unit panel (Figure 34) or the ARCUNIT command to change the unit to which DB2 archives its logs. The unit name specified must be that of a unit generated to the MVS system. This feature is useful when the devices assigned to the unit name become full or unusable.

---

**NOTE**

If an active log is being archived at the time the ARCUNIT is changed, the BSDS entry that reflects the archive might contain an incorrect unit type. Use the OPERTUNE Active Log Manipulation feature to view and correct the situation (see “Active log manipulation” on page 281).

**Figure 34  Modify Archive Unit panel**

```
DDTG DBI1                        Modify Archive Unit
Command ===> _________________________________________________________________

Command: CURRENT

Description . . . . . . : ARCHIVE UNIT

Type the new values for the archive unit parameters you wish to change. Then press Enter.

Note: If an active log is being archived at the time the ARCUNIT is changed, the BSDS entry that reflects that archive may contain an incorrect unit type. To view and correct this situation, use the OPERTUNE Operational Assist Feature, "Update Archive Log BSDS Entries".

Archive Unit Parameter
Unit type . . . . . . . . . .
Unit2 type . . . . . . . . .  
```
Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET ARCUNIT - (  type1  .type2  )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>type1</td>
<td>Specify the device type or unit name of the copy1 archive unit (the unit to which the first set of archives will be logged). Any alphanumeric string is valid.</td>
</tr>
<tr>
<td>type2</td>
<td>Specify the device type or unit name of the copy2 archive unit (the unit to which the first set of archives will be logged). Any alphanumeric string is valid.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit type</td>
<td>DSNTIPA</td>
<td>ARCHDEVT</td>
<td>DSN6ARVP</td>
<td>UNIT</td>
</tr>
<tr>
<td>Unit2 type</td>
<td>DSNTIPA</td>
<td>ARCHDEV2</td>
<td>DSN6ARVP</td>
<td>UNIT2</td>
</tr>
</tbody>
</table>
ARCWTOR—Archive WTOR parameter

Use the Modify Subsystem Archive WTOR Indicator panel (Figure 35) or the ARCWTOR command to turn the DB2 WTOR prompt on or off. If the archive request causes a mount, turning the WTOR prompt on gives the operator a chance to prepare the mount before the MVS mount message occurs.

Figure 35 Modify Subsystem Archive WTOR Indicator panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)        SET ARCWTOR (Y or N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DB2ssid</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the</td>
</tr>
<tr>
<td></td>
<td>command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or</td>
</tr>
<tr>
<td></td>
<td>the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><code>Y</code></td>
<td>The WTOR prompt is turned on (a message is sent to the operator and a reply</td>
</tr>
<tr>
<td></td>
<td>is received before trying to mount an archive log data set).</td>
</tr>
<tr>
<td><code>N</code></td>
<td>The WTOR prompt is turned off.</td>
</tr>
<tr>
<td><code>NORESET</code></td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use WTOR</td>
<td>DSNTP1A</td>
<td>ARCHWTOR</td>
<td>DSN6ARVP</td>
<td>ARCWTOR</td>
</tr>
</tbody>
</table>
ASSIST—Assist parallel processing parameter

Use the Modify Assist Parallel Processing panel (Figure 36) or the ASSIST command to specify whether the DB2 subsystem can assist a parallelism coordinator with parallel processing. Use this element if you want to see the impact of parallel processing for a query, but you must change the ASSIST setting so that members of the data sharing group can participate in a parallel query.

To qualify as an assistant at run time, the VPSEQT, VPPSEQT and VPXPSEQT buffer pool thresholds of this DB2 member must each be greater than zero.

Figure 36  Modify Assist Parallel Processing panel

![Modify Assist Parallel Processing panel]

Command syntax and parameters

```plaintext
IN(DB2ssid@opertuneID) SET ASSIST ( Y or N ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The DB2 member is considered an assistant at both bind and run times.</td>
</tr>
<tr>
<td>N</td>
<td>The DB2 member is not considered an assistant at either bind or run time.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation</th>
<th>CLIST</th>
<th>ZPARM macro</th>
<th>ZPARAM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIPK</td>
<td>ASSIST</td>
<td>DSN6GRP</td>
<td>ASSIST</td>
</tr>
</tbody>
</table>
AUTHCACH—Authorization cache size

Use the Modify Authorization Cache Size panel (Figure 37) or the AUTHCACH command to specify the amount of storage that DB2 will allocate for a plan authorization cache block if cache size is not specified when the plan is bound. This cache is used by DB2 to store data specifying the users who are authorized to use the plan.

If the cache size is zero or is too small, catalog accesses might have to determine a user’s authorization. The authorization cache block is allocated from EDM pool storage.

Figure 37  Modify Authorization Cache Size panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
Element descriptions

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| value | The amount of storage (in bytes) that DB2 will allocate for a plan authorization cache block if cache size is not specified when the plan is bound. Specify one of the following values:  
- a numerical value in the range 0–4096  
  This value must be a multiple of 256.  
- a delta value  
  Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–4096 and must be a multiple of 256. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cache size</td>
<td>DSNTIPP</td>
<td>AUTHCACH</td>
<td>DSN6SPRM</td>
<td>AUTHCACH</td>
</tr>
</tbody>
</table>

### AUTHCHK—Authorization check indicator

Use the Modify Authorization Check Indicator panel (Figure 38 on page 89) or the AUTHCHK command to specify whether DB2 authorization checking takes place. The new value takes effect immediately with the next authorization check. Use this element if you need to temporarily switch off authorization checking because of access errors for the DB2 authorization tables. Once access to the tables has been established, you can turn authorization checking back on.

**NOTE**

This element is subject to OPERTUNE security checking. Only authorized OPERTUNE systems and users are allowed to alter the authorization check indicator.
Figure 38  Modify Authorization Check Indicator panel

DDTG DB11  Modify Authorization Check Indicator
Command ==> ____________________________________________

Description . . . . . . . . : AUTH CHECK ENABLING
Type the new authorization value that you wish to change to. Then press Enter.

DB2 Authorization Parameter
   Enabled . . . . . . . . . . _ ( Y or N )

Command syntax and parameters

IN(DB2ssid@opertuneID)  SET AUTHCHK (-- Y | N ) NORESET

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>DB2 authorization checking is enabled.</td>
</tr>
<tr>
<td>N</td>
<td>DB2 authorization checking is disabled.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTPPP</td>
<td>PROAUTH</td>
<td>DSN6SPRM</td>
<td>AUTH</td>
</tr>
</tbody>
</table>
BINDNV—Bind new package

Use the Modify Bind New Package panel (Figure 39) or the BINDNV command to specify the explicit privilege required by a user to be authorized to bind a new version of a package. The two privileges that can be specified are BIND and BINDADD.

Figure 39  Modify Bind New Package panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET BINDNV --(BIND BINDADD) -- NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>BIND</td>
<td>The user must have BIND authority to bind a new version of a package.</td>
</tr>
<tr>
<td>BINDADD</td>
<td>The user must have BINDADD authority to bind a new version of a package.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority required</td>
<td>DSNTIPP</td>
<td>BINDNV</td>
<td>DSN6SPRM</td>
<td>BINDNV</td>
</tr>
</tbody>
</table>
BMPTOUT—IMS/BMP region timeout factor

Use the Modify IMS/BMP Timeout Multiplier panel (Figure 40) or the BMPTOUT command to specify a factor that DB2 uses to calculate how long an IMS/BMP region can wait for an unavailable resource. You can use this element to avoid timeouts due to unavailable resources by increasing the factor that is used to determine the number of resource timeouts.

The real length of time that an IMS/BMP region waits is calculated as the BMPTOUT value multiplied by the RESOURCE TIMEOUT value.

**Figure 40  Modify IMS/BMP Timeout Multiplier panel**

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET BMPTOUT ( -value -)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value   | The factor used to determine the amount of time that a utility waits for a lock or for claims to be released. This value is multiplied by the resource timeout value. Specify one of the following values:  

  - a numerical value in the range 1–254  
  - a numerical value of 0  
  - a delta value  

  Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–254. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeout multiplier</td>
<td>DSNTIPI</td>
<td>BMPTOUT</td>
<td>DSN6SPRM</td>
<td>BMPTOUT</td>
</tr>
</tbody>
</table>

BP—Buffer pool parameters

Use the Modify BPx panel (Figure 41) or the BP command to specify the size thresholds for a buffer pool. Ranges vary, depending on the buffer pool requested.

Buffer pool expansions take place immediately; buffer pool reductions might not be immediate. As buffer pools are expanded, ECSA increases by approximately 24 bytes per newly allocated page. ECSA decreases after the buffer pools contract, but it may not return to its original value.

NOTE
Changing the size of a buffer pool causes a change in that buffer pool’s threshold values. Exercise caution when contracting a buffer pool to ensure that no undesired thresholds are exceeded.

Figure 41  Modify BP0 panel

DDTZ DGB2                        Modify BP0
Command ===> _________________________________________________________________
Command: CURRENT

Description . . . . . . . . : BUFFER POOL PARAMETERS

Type the new buffer pool attribute values that you wish to change. Then press Enter.

Buffer Pool Attribute Parameters
  VPSIZE . . . . . . . . . . (56-250000000 or delta)
  HPSIZE . . . . . . . . . . (0-2097152 or delta)
  VPSEQT . . . . . . . . . . (0-100 or delta)
  VPPSEQT . . . . . . . . . . (0-100 or delta)
  HPSEQT . . . . . . . . . . (0-100 or delta)
  DWQT . . . . . . . . . . . (0-90 or delta)
  VDWQT . . . . . . . . . . . (0-90 or delta)
  CASTOUT . . . . . . . . . . (Y or N)
  VPXPSEQT . . . . . . . . . . (0-100 or delta)
  VPTYPE . . . . . . . . . . . (PRIMARY or DATASPACE)
  PGSTEAL . . . . . . . . . . . (LRU or FIFO)
Because OPERTUNE treats the buffer pool size and the buffer pool prefetch size as distinct elements, you can make changes to their values independently. This independence allows you to set a buffer pool size to a large value while keeping the associated prefetch value small or to set the buffer pool size to a small value while running with a large buffer pool prefetch quantity.

### Command syntax and parameters

```sql
IN(db2@optn) SET BPn (vpSize, hpSize, vpSeqt, vppSeqt, hpSeqt, dwqt, vdwqt, castout, vppxSeqt, vptype, pgSteal, npreset)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| **n** | Buffer pool ID. Select one of the following buffer pools from the list:  
| | 0–49 for 4 KB buffers  
| | 8K0–8K9 for 8 KB buffers  
| | 16K0–16K9 for 16 KB buffers  
<p>| | 32K–32K9 for 32 KB buffers |</p>
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| *vpSize* | Virtual pool size. Specify one of the following values for DB2 version 8 and later releases:  
  - 56-250000000 for buffer pool BP0  
  - 0-250000000 for 4-KB buffer pools other than BP0  
  - 1000-125000000 for buffer pool BP8K0  
  - 0-125000000 for 8-KB buffer pools other than BP8K0  
  - 500-62500000 for BP16K0  
  - 0-62500000 for 16-KB buffer pools other than BP16K0  
  - 250-31250000 for BP32K  
  - 0-31250000 for 32-KB buffer pools other than BP32K  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The value must fall in the appropriate range for the specified buffer pool.  
| Note: The total VPSIZE for all buffer pools cannot exceed 1 TB. |
| Specify one of the following values for DB2 version 7:  
  - 56–400000* for buffer pool BP0  
  - 0–400000* for 4-KB buffer pools other than BP0  
  - 0–200000* for 8-KB buffer pools  
  - 0–100000* for 16-KB buffer pools  
  - 0–50000* for 32-KB buffer pools  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The value must fall in the appropriate range for the specified buffer pool.  
| * If data spaces are used, these values can be up to 8000000. |
| *hpSize* | Hiperpool size. Specify one of the following values:  
  - 0–2097152 for a 4-KB page hiperpool  
  - 0–1048576 for an 8-KB page hiperpool  
  - 0–524288 for a 16-KB page hiperpool  
  - 0–262144 for a 32-KB page hiperpool  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The value must fall in the appropriate range for the specified hiperpool.  
| Note: This field does not apply to DB2 Version 8 and later releases. |
| *vpSeqt* | Virtual pool sequential steal threshold (percentage of buffers that are allocated to sequential and prefetch page reads). Specify one of the following values:  
  - 0 disables prefetch  
  - 1–100  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–100. |
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| vppSeqt | Virtual pool parallel sequential threshold. Represents the portion of the virtual buffer pool that can be used to support parallel I/O operations. Specify one of the following values:  
  ■ 0—disables parallel I/O  
  ■ 1–100  
  ■ a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–100. |
| hpSeqt  | Hiperpool sequential steal threshold. Represents the percentage of the hiperpool that can be occupied by sequentially accessed pages. Specify one of the following values:  
  ■ 0–100  
  ■ a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–100.  
  
  Note: This field does not apply to DB2 Version 8 and later releases. |
| dwqpt   | Deferred write queue threshold. The percentage of the virtual buffer pool that can be occupied by unavailable pages (updated or in use). Specify one of the following values:  
  ■ 0–90  
  ■ a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–90. |
| vdwqpt  | Virtual pool vertical deferred write threshold. The percentage of the virtual buffer pool that can be occupied by updated pages from a single page set. Specify one of the following values:  
  ■ 0–90  
  ■ a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–90.  
  
  This value must be less than or equal to the value that you specify for dwqpt. |
| castout | Hiperspace castout attribute. Determines whether MVS will discard data which is cached in the hiperpool when a shortage of expanded storage occurs. Specify one of the following values:  
  ■ Y—allows MVS to discard data  
  ■ N—prevents data from being discarded, except for expanded storage pages that are reconfigured offline.  
  
  Note: This field does not apply to DB2 version 8 and later releases. |
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#### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPSIZE</td>
<td>DSNTIP1-2</td>
<td>BP0 to BP49 for 4-KB buffers 8K0 to 8K9 for 8-KB buffers 16K0 to 16K9 for 16-KB buffers 32K to 32K9 for 32-KB buffers</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>HPSIZE</td>
<td>DSNTIP1-2</td>
<td>NA</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>CASTOUT</td>
<td>DSNTIP1-2</td>
<td>NA</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>VPSEQT</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>VPPSEQT</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>HPSEQT</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>DWQT</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>VDWQT</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>VPXPSEQT</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

### NOTE

Although a buffer pool expansion request is immediate, a contraction request that involves an active portion of the buffer pool might take longer to complete.
CACHEFL—Free local cached dynamic statements

Use the Modify panel (Figure 43) or the CACHEFL command to determine whether DB2 can free local cached statements to relieve storage constraints below the 2 GB bar. This element applies only to plans and packages bound with KEEPDYNAMIC(YES).

**Figure 42  Modify panel**

<table>
<thead>
<tr>
<th>DDTAMDY 2</th>
<th>Modify Free Local Cached Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command: CURRENT</td>
<td></td>
</tr>
<tr>
<td>Description: FREE CACHED STATEMENTS</td>
<td></td>
</tr>
<tr>
<td>Type the new Free Local Cached Statements value you wish to change to. Then press Enter.</td>
<td></td>
</tr>
</tbody>
</table>

**Free Local Cached Statements Parameter**

**Free Indicator . . . . . . . _ (0 or 1)**

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) — SET CACHEFL — ( 0 1 ) — NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>0</td>
<td>DB2 cannot free local cached statements to relieve storage constraints below the bar.</td>
</tr>
<tr>
<td>1</td>
<td>DB2 can free local cached statements to relieve storage constraints below the bar. This is the DB2 default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free indicator</td>
<td></td>
<td></td>
<td>DSN6SPRM</td>
<td>CACHEDYN_FREELOCAL</td>
</tr>
</tbody>
</table>
CACHEDYN—Cache dynamic SQL

Use the Modify Cache Dynamic SQL panel (Figure 43) or the CACHEDYN command to determine whether prepared dynamic SQL is cached in the EDM pool for use by later processes. You can use this element to determine if performance may be improved by enabling or disabling dynamic SQL caching for a package.

**Figure 43  Modify Cache Dynamic SQL panel**

```
Command: CURRENT

Description: CACHE DYNAMIC SQL

Type the new Cache Dynamic SQL value you wish to change to. Then press Enter.

Cache Dynamic SQL Parameter
Enabled (Y or N) NORESET
```

**Command syntax and parameters**

- `IN(DB2ssid@opertuneID) — SET CACHEDYN — (Y or N) NORESET`

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DB2ssid</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><code>Y</code></td>
<td>Dynamic SQL statements are cached and saved.</td>
</tr>
<tr>
<td><code>N</code></td>
<td>Dynamic SQL statements are not cached and saved.</td>
</tr>
<tr>
<td><code>NORESET</code></td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**Field**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIP4</td>
<td>CACHEDYN</td>
<td>DSN6SPRM</td>
<td>CACHEDYN</td>
</tr>
</tbody>
</table>
CATTBUPD—Catalog table update

Use the Modify Catalog Table Update panel (Figure 44) or the CATTBUPD command to specify whether DB2 will allow the tables of the DB2 catalog to be updated. You can use this element to change the access path selected by the optimizer to increase the performance of a specific SQL statement. Set CATTBUPD to Y to enable updates to the catalog tables, then update the tables to cause a change in the access path that was selected.

**Figure 44  Modify Catalog Table Update panel**

![Modify Catalog Table Update panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET CATTBUPD ( Y | N )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Updating of DB2 catalog tables is enabled.</td>
</tr>
<tr>
<td>N</td>
<td>Updating of DB2 catalog tables is disabled.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>none</td>
<td>SPRMCTU</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>
CDSSRDEF—Current degree special register

Use the Modify Current Degree Special Register Value panel (Figure 45) or the CDSSRDEF command to specify the special register default for parallel processing. This value is used when no degree is explicitly set by using the SET CURRENT DEGREE statement. You can use this element to determine the effect of parallel processing against some queries by disabling query parallelism, running and measuring the queries, and then enabling query parallelism and rerunning the queries.

Figure 45  Modify Current Degree Special Register Value panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) — SET CDSSRDEF — (1 or ANY) — NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>1</td>
<td>Query parallelism is disabled.</td>
</tr>
<tr>
<td>ANY</td>
<td>Query parallelism is enabled.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current degree</td>
<td>DSNTIP4</td>
<td>CDSSRDEF</td>
<td>DSN6SPRM</td>
<td>CDSSRDEF</td>
</tr>
</tbody>
</table>
**CHGDC—Change data capture**

Use the Modify Change Data Capture panel (Figure 46) or the CHGDC command to specify whether to use IMS DataPropagator to propagate SQL changes to tables that are defined with the setting DATA CAPTURE CHANGES.

**Figure 46  Modify Change Data Capture panel**

![Modify Change Data Capture panel diagram]

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET CHGDC ( Y N ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>IMS DataPropagator will propagate the SQL changes.</td>
</tr>
<tr>
<td>N</td>
<td>The SQL changes will not be propagated.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data capture enabled</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>CHGDC</td>
</tr>
</tbody>
</table>
CHKPTFRQ—Checkpoint frequency

Use the Modify Checkpoint Frequency panel (Figure 47) or the CHKPTFRQ command to specify the value for the checkpoint frequency. This value specifies either the number of log records that DB2 writes or the number of minutes DB2 waits between the start of successive checkpoints. The new value is used immediately. If both values are specified, a checkpoint is taken when the first threshold is reached.

Figure 47  Modify Checkpoint Frequency panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Checkpoint frequency. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■ a numerical value in the range 1–60 (represents the number of minutes between checkpoints)</td>
</tr>
<tr>
<td></td>
<td>■ a numerical value in the range 200–16000000 (represents the number of log records written between checkpoints)</td>
</tr>
<tr>
<td></td>
<td>■ a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 200–16000000</td>
</tr>
<tr>
<td></td>
<td>Note: Values between 60 and 200 are invalid.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log records/checkpoint</td>
<td>DSNTIPN</td>
<td>OPCHKFRQ</td>
<td>DSN6SYSP</td>
<td>LOGLOAD</td>
</tr>
</tbody>
</table>

**COMAXPAG—Maximum pages castout**

Use the Modify Castout Maximum Pages panel (Figure 48) or the COMAXPAG command to specify the maximum number of pages that can be cast out of a group buffer pool during a single castout operation. You can use this element to improve the efficiency of castout operations by increasing the number of pages.

**Figure 48  Modify Castout Maximum Pages panel**

DDTG DB11                Modify Castout Maximum Pages
Command ===> _________________________________________________________________

Command: CURRENT
Description . . . . . . . . : MAXIMUM PAGES CASTOUT
Type the maximum pages to castout you wish to change to. Then press Enter.
Castout Maximum Pages
   Maximum Pages to castout . . _______ (1-32767 or delta)

**Command syntax and parameters**

`IN(DB2ssid@opertuneID)  SET COMAXPAG — (– value —)  NORESET`

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
### Value Description

| value | Maximum pages to cast out. Specify one of the following values:  
|       | • a numerical value in the range 1–32767  
|       | • a delta value  
|       | Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–32767. |

| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum pages to castout</td>
<td>none</td>
<td>SPRMCO1</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>

## CONTSTOR—Free unused thread storage

Use the Modify Free Unused Thread Storage panel (Figure 49) or the CONTSTOR command to specify whether DB2 periodically contracts the working storage area for each thread and to specify at what intervals this occurs.

**Figure 49  Modify Free Unused Thread Storage panel**

```
DDTG DBI1               Modify Free Unused Thread Storage
Command ===> _________________________________________________________________

Command: CURRENT

Description . . . . . . . . : CONTRACT THREAD WORKING STORAGE

Type the new Free Unused Thread Storage parameters you wish to change to.
Then Press Enter.

Free Unused Thread Storage
  Enabled . . . . . . . . . (Y or N)
  Thread Commit Threshold . . _______ (1 - 32767 or delta)
  Storage Limit Threshold . . _______ (1 - 2097152 or delta) Kilobytes
```
Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET CONTSTOR ( [N Y] , globalCommitT ) , globalLongStorageT ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>DB2 determines the need for a storage contraction for a thread after each commit. If the number of commits since the last contraction or the amount of long term storage acquired has exceeded a global threshold, unused storage is freed.</td>
</tr>
<tr>
<td>N</td>
<td>DB2 does not periodically contract each thread’s working storage area.</td>
</tr>
</tbody>
</table>
| globalCommitT      | Global threshold for the number of commits that must occur before unused thread storage is freed. Specify one of the following values:  
|                   |  ■ a numerical value in the range 1–32767  
|                   |  ■ a delta value                          
|                   | Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–32767.       |
| globalLongStorageT | Global threshold for the amount of long term storage acquired (in kilobytes) that must be exceeded before unused thread storage is freed. Specify one of the following values:  
|                   |  ■ a numerical value in the range 1–2097152  
|                   |  ■ a delta value                           
|                   | Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–2097152. |
| NORESET            | The changes you request remain in effect until the DB2 subsystem is cycled.                                                                     |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSN T</td>
<td>CONTSTOR</td>
<td>DSN6SPRM</td>
<td>CONTSTOR</td>
</tr>
</tbody>
</table>
COORDNTR—Coordinate parallel processing

Use the Modify Coordinate Parallel Processing panel (Figure 50) or the COORDNTR command to specify whether this DB2 member can coordinate parallel processing for other members of the group.

Figure 50  Modify Coordinate Parallel Processing panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the</td>
</tr>
<tr>
<td></td>
<td>command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or</td>
</tr>
<tr>
<td></td>
<td>the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>A read-only query running on this DB2 member can be processed in part on</td>
</tr>
<tr>
<td></td>
<td>other members of the group</td>
</tr>
<tr>
<td>N</td>
<td>A read-only query can be processed only by this DB2 member</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIPK</td>
<td>COORDNTR</td>
<td>DSN6GRP</td>
<td>COORDNTR</td>
</tr>
</tbody>
</table>
CORVRSTH—Castout reverse threshold

Use the Modify Castout Reverse Threshold panel (Figure 51) or the CORVRSTH command to control the number of write I/Os that are scheduled when a buffer pool threshold is reached. If, for example, the reverse threshold is 10, write I/Os are scheduled until the number of changed pages remaining in the buffer pool is 10 percent below the threshold. You can use this element to increase efficiency of castouts by increasing the castout reverse threshold and preventing castouts from occurring too frequently.

Figure 51  Modify Castout Reverse Threshold panel

```
DDTG DBI1  Modify Castout Reverse Threshold
Command ==> _____________________________________________________________

Description . . . . . . . . : CASTOUT REVERSE THRESHOLD

Type the Castout Reverse Threshold percentage you wish to change to. Then press Enter.

Castout Reverse Threshold Percentage
Castout Reverse Threshold. . _____ (1-99 or delta)
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET CORVRSTH  (− value −)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Castout reverse threshold (the number of write I/Os that are scheduled when a buffer pool threshold is reached). Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>• a numerical value in the range 1–99</td>
</tr>
<tr>
<td></td>
<td>• a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–99.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castout Reverse Threshold</td>
<td>none</td>
<td>SPRMCO2</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>
COTIMINT—Castout timer interval

Use the Modify Castout Timer Interval panel (Figure 52) or the COTIMINT command to specify the interval for checking if GBPOOLT or CLASST exceptions have occurred. When these exceptions occur, DB2 initiates an appropriate castout operation.

Figure 52  Modify Castout Timer Interval panel

![Figure 52 Modify Castout Timer Interval panel]

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET COTIMINT (-- value --) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Castout time interval (in seconds). Specify one of the following values: a numerical value in the range 1–300, a delta value. Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–300.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castout Timer Interval</td>
<td>none</td>
<td>SPRMSCT</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>
DBACRVW—DBADM create view

Use the Modify DBADM Create View panel (Figure 53) or the DBACRVW command to specify both of the following conditions:

- whether an authorization ID with DBADM authority can create a view for another authorization ID
- whether an authorization ID with DBCTRL or DBADM authority on the database of the table for which an alias is being created can create an alias for itself or another authorization ID

You can use this element to temporarily extend the authority of users who have DBCTRL and DBADM privileges over a specific database. Once they have created the necessary aliases and views, you can then use this element to remove the privileges.

**Figure 53  Modify Dbadm Create View panel**

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTURE is running as a started task) or the batch job name (if OPERTURE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Enable the DBADM Create View indicator</td>
</tr>
<tr>
<td>N</td>
<td>Disable the DBADM Create View indicator</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Dbadm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DBPROTCL—Default DBPROTOCOL bind option</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use the Modify Default DBPROTOCOL Bind Option panel (Figure 54) or the DBPROTCL command to specify the default value for the DBPROTOCOL BIND option.

**NOTE**

This element does not apply to DB2 version 9 and later releases.

**Figure 54   Modify Default DBPROTOCOL Bind Option panel**

```
DDTG DBI1 Command ===> ________________________________________________________________
Command: CURRENT
Description . . . . . . . . . : DBPROTOCOL BIND OPTION DEFAULT
Type the new Default DBPROTOCOL Bind Option that you wish to change to. Then press Enter.
Default DBPROTOCOL Bind Option
  DBPROTOCOL value . . . . . ______ (DRDA or PRIVATE)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) -- SET DBPROTCL -- (DRDA) -- (PRIVATE) -- NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
The changes that you make to this element do not take effect until the next time that DDF is started.
Command syntax and parameters

```
IN('DB2ssid@opertuneID') SET DDFINTV ('value') NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DB2ssid</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| `value`       | Interval cycle frequency (in seconds) of the DDF error monitor task. Specify one of the following values:  
  - a numerical value in the range 1–300  
  - a delta value  
    Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–300. |

| NORESET       | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval cycle frequency</td>
<td>none</td>
<td>SPRMINT</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>

DDFQCTM—DDF queued conversation time

Use the Modify DDF Queued Conversation Time panel (Figure 56) or the DDFQCTM command to specify the time period that a DDF conversation request can remain queued before being timed out. A request can be queued because of a maximum concurrent session limit. This limit could have been determined from the DSESLIM option of the VTAM APPL definition or from the CONVLIMIT column of the SYSLUMODES table.

You can use this element to give DDF remote requests more time to connect in the case of queued distribution thread time outs.
Figure 56  Modify DDF Queued Conversation Time panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET DDFQCTM — (− value −) — NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value    | DDF queued conversation time (in seconds). The length of time that a DDF conversation request remains queued before being timed out. Specify one of the following values:  
  ■ a numerical value in the range 1–32767  
  ■ a delta value  
  Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–32767. |
| NORESET  | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queued conversation time</td>
<td>none</td>
<td>SPRMQCT</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>
DDFRBS—DDF receive buffer size

Use the Modify DDF Receive Buffer Size panel (Figure 57 on page 114) or the DDFRBS command to specify the amount of storage needed for the DDF receive buffer. This value is used by DDF to allocate storage needed to receive messages for remote requests.

High DDF message traffic, such as queries, is handled more efficiently with large buffers. Low DDF message traffic (inserts and updates) is handled more efficiently with small buffers. If your DDF workload shifts from mostly queries to mostly insert/updates, you can reduce DDF message overhead by increasing or decreasing the DDFRBS to match the workload.

Figure 57  Modify DDF Receive Buffer Size panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>DDF receive buffer size (in kilobytes). The amount of storage DDF allocates to receive messages for remote requests. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a value in the range 2K–30K (in 1-KB increments)</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 2 KB–30 KB (in 1-KB increments).</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDF Receive Buffer Size</td>
<td>none</td>
<td>SPRMDRB</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>

**DEFID—DB2 default system user ID**

Use the Modify Default System User ID panel (Figure 58) or the DEFID command to specify a new DB2 default system user ID. The new value is used the next time an undefined user attempts to access DB2.

**NOTE**

This element is subject to OPERTUNE security checking. Only authorized OPERTUNE systems and users are allowed to alter the DB2 default system user ID.

**Figure 58   Modify Default System User ID panel**

```
DDTG DB11      Modify Default System User ID
Command ===> _________________________________________________________________
Command: CURRENT

Description . . . . . . . : DEFAULT SYSTEM USER ID

Type the new default userid value that you wish to change to. Then press Enter.

Default System Parameter
User ID . . . . . . . . . .
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET DEFID — (-authID-) 

NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
authID

Default system user ID. This value is used when an undefined user attempts to access DB2.

- DB2 version 7: Authorization IDs must be 1–8 characters.
- DB2 version 8 and later: Authorization IDs must be 1–128 characters.*

The first character must be a letter of the alphabet or a national character ($, #, or @). The remaining characters can be alphanumeric or national. The DB2 default is IBMUSER.

*OPERTUNE panels display only the first 8 characters of authorization IDs. To change the auth ID to a longer name, type the first 8 characters in the User ID field and press Enter. Use the EDIT command on the Command Confirmation panel to modify the ID to a longer value before submitting the command.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>authID</td>
<td>Default system user ID. This value is used when an undefined user attempts to access DB2.</td>
</tr>
<tr>
<td></td>
<td>- DB2 version 7: Authorization IDs must be 1–8 characters.</td>
</tr>
<tr>
<td></td>
<td>- DB2 version 8 and later: Authorization IDs must be 1–128 characters.*</td>
</tr>
<tr>
<td></td>
<td>The first character must be a letter of the alphabet or a national character ($, #, or @). The remaining characters can be alphanumeric or national. The DB2 default is IBMUSER.</td>
</tr>
<tr>
<td></td>
<td>*OPERTUNE panels display only the first 8 characters of authorization IDs. To change the auth ID to a longer name, type the first 8 characters in the User ID field and press Enter. Use the EDIT command on the Command Confirmation panel to modify the ID to a longer value before submitting the command.</td>
</tr>
</tbody>
</table>

NORESET

The changes you request remain in effect until the DB2 subsystem is cycled.

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>User ID</td>
<td>DSNTIPP</td>
<td>PROTUNKN</td>
<td>DSN6SPRM</td>
<td>DEFLTID</td>
</tr>
</tbody>
</table>
DESCSTAT—Build DESCRIBE data

Use the Modify Build Describe Data panel (Figure 59) or the DESCSTAT command to specify whether information is saved with each applicable static SQL statement (an SQL DESCRIBE is performed against the statement).

**NOTE**
When you set DESCSTAT to Y, there is a slight increase in the space a plan or package needs on DASD and in the EDM pool.

If the DESCSTAT parameter is set to NO to save memory and DASD space, and you need to perform a a DESCRIBE against SQL statement, you can change the DESCSTAT parameter to YES and rebind the plans, then perform the DESCRIBE.

**Figure 59  Modify Build Describe Data panel**

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET DESCSTAT ( Y or N )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Information is saved during the BIND process.</td>
</tr>
<tr>
<td>N</td>
<td>Information is not saved during the BIND process.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIPF</td>
<td>DESCSTAT</td>
<td>DSN6SPRM</td>
<td>DESCSTAT</td>
</tr>
</tbody>
</table>

**DISABSCL—Disable scrollable cursor messages**

Use the Modify Disable Scrollable Cursor panel (Figure 60) or the DISABSCL command to enable or disable scrollable cursor messages on OPEN and ALLOCATION CURSOR SQL.

DB2 Version 7 provided the static scrollable cursor function in which scrolling is performed on a materialized global temporary table. DB2 Version 8 extends the scrollable cursor function by implementing a dynamic scrollable cursor. A dynamic scrollable cursor lets applications scroll directly on the base table while accessing the most current data, including newly inserted rows. The dynamic scrollable cursor function is particularly beneficial for large result sets that would otherwise need to be materialized. Dynamic scrolling is also supported by data-partitioned secondary indexes, index scans, and table space scans.

**Figure 60  Modify Disable Scrollable Cursor panel**

![Modify Disable Scrollable Cursor panel](image)

**Command syntax and parameters**

```sql
IN(DB2ssid@opertuneID) SET DISABSCL (NO, YES) NORESET
```
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARAM macro</th>
<th>ZPARAM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISABSCL</td>
<td>DSNTIJUZ</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>DISABSCL</td>
</tr>
</tbody>
</table>
DLDFREQ—Down-level detect frequency

Use the Modify Down-Level Detect Frequency panel (Figure 61) or the DLDFREQ command to specify the number of checkpoints that will be taken between updates to the level ID of a page set or partition. Although the level ID is always updated when the page set partition is closed, DLDFREQ allows you to specify periodic updates in addition to those performed at close.

Figure 61  Modify Down-Level Detect Frequency panel

![Command syntax and parameters]

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>none</td>
<td>DLDFFREQ</td>
<td>DSN6SYSP</td>
<td>DLDFFREQ</td>
</tr>
</tbody>
</table>

DB2 parameter values

Value                  Description                                                                                     
DB2ssid                DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.     
opertuneID             OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).     
value                  Number of checkpoints that comprise the interval between updates to the level ID of a page set or partition. Specify one of the following values:
  0 disables down-level detection
  a numerical value in the range 1–65535
  a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–65535
NORESET                The changes you request remain in effect until the DB2 subsystem is cycled.
DLITOUT—IMS/DLI region timeout factor

Use the Modify IMS/DLI Timeout Multiplier panel (Figure 62) or the DLITOUT command to specify a factor that DB2 will use to calculate how long an IMS/DLI region can wait for an unavailable resource. You can use this element to increase the factor and avoid timeouts due to unavailable resources.

The real length of time that an IMS/DLI region waits is calculated as the DLITOUT value multiplied by the RESOURCE TIMEOUT value.

Figure 62  Modify IMS/DLI Timeout Multiplier panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The factor used to determine the amount of time that a utility waits for a lock or for claims to be released. This value is multiplied by the resource timeout value. Specify one of the following values: a numerical value in the range 1–254 0—the DB2 default is used. a delta value Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–254.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeout multiplier</td>
<td>DSNTIPI</td>
<td>DLITOUT</td>
<td>DSN6SPRM</td>
<td>DLITOUT</td>
</tr>
</tbody>
</table>

**DSSTIME—Data set statistics reset time**

Use the Modify Dataset Statistics Reset In panel (Figure 63) or the DSSTIME command to specify the time interval between the resetting of data set statistics for online performance monitors.

**Figure 63  Modify Dataset Statistics Reset In panel**

```plaintext
Command: CURRENT
Description: DATA SET STATISTICS RESET TIME
Type the new DSN Statistics Reset Time that you wish to change to. Then press Enter.
```

**Command syntax and parameters**

```plaintext
IN(DB2ssid@opertuneID) SET DSSTIME (- value -) [NORESET]
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The time interval in minutes between data set statistics resets for online performance monitors. Enter a value between 1 to 1440, or enter a delta value.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dataset Stats Time</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>DSSTIME</td>
</tr>
</tbody>
</table>

DSVCI—Variable VSAM control intervals

Use the Modify Data Set Variable VSAM Control Intervals panel (Figure 64) or the DSVCI command to control whether DB2 will use VSAM to manage the data set for a table space.

**Figure 64  Modify Data Set Variable VSAM Control Intervals panel**

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET DSVCI  (Y N)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>A DB2-managed data set is created with a VSAM control interval that corresponds to the size of the buffer pool used for the table space.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vary DS Control Interval</td>
<td>DSNTIP7</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>DSVCI</td>
</tr>
</tbody>
</table>

DUALARC—Dual log archiving switch

Use the Modify Subsystem Dual Archiving Indicator panel (Figure 65) or the DUALARC command to turn dual archiving on or off dynamically. The new value is used the next time DB2 archives an active log.

**NOTE**

After switching from dual to single archiving mode, DB2 issues message DSNJ114I for each subsequent archive request. This is not an error. The message indicates that the subsystem recognizes single archiving is in effect.
Command syntax and parameters

```plaintext
IN(DB2ssid@opertuneID) SET DUALARC (Y N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Dual archiving is enabled.</td>
</tr>
<tr>
<td>N</td>
<td>Dual archiving is disabled.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch</td>
<td>DSNTIPH</td>
<td>ARCHTWO</td>
<td>DSN6LOGP</td>
<td>TWOARCH</td>
</tr>
</tbody>
</table>

EDMBFIT—Free chain search algorithm

Use the Modify Free Chain Search Algorithm panel (Figure 66 on page 126) or the EDMBFIT command to determine which free chain search algorithm is used on systems with a large EDM pool (greater than 40 MB).

**NOTE**

In the trade-off between performance and space utilization, space is normally more critical for smaller EDM pools and performance is more critical for larger EDM pools. When EDM pool size must be limited, EDMBFIT can be set to Yes to optimize free space utilization. When EDM pool size can be increased, setting EDMBFIT to No optimizes performance.
Figure 66  Modify Free Chain Search Algorithm panel

DOTG DBII Modify Free Chain Search Algorithm
Command ====> _________________________________________________________________

Description . . . . . . . . : FREE CHAIN SEARCH ALGORITHM

Type the new Free Chain Search Algorithm indicator you wish to change to. Then
Press Enter.

Free Chain Search Algorithm Indicator
   Enabled . . . . . . . . . (Y or N)

Command syntax and parameters

IN(DB2ssid@opertuneID) — SET EDMBFIT - (Y N) — NORESET

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The better fit algorithm is used. This value optimizes for better storage use, which is more important for smaller EDM pools.</td>
</tr>
<tr>
<td>N</td>
<td>The first fit algorithm is used. This value optimizes for better performance, which is more important for larger EDM pools.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTP4</td>
<td>SPRMEBF</td>
<td>DSN6SPRM</td>
<td>EDMBFIT</td>
</tr>
</tbody>
</table>
EDMDBDC—EDM pool DBD cache size

Use the Modify EDM Pool DBD Cache Minimum panel (Figure 67) or the EDMDBDC command to specify the minimum size of the DBD cache that is used by the Environmental Descriptor Manager (EDM).

**Figure 67  Modify EDM Pool DBD Cache Minimum panel**

![Figure 67](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) --- SET EDMDBDC (-- value --) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Minimum size of the DBD cache in kilobytes. You must specify the value in kilobytes; the macro will convert the value to bytes. Acceptable values are 5000 to 2097151. The default value is calculated.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDM DBD Cache</td>
<td>DSNTIPC</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDMDBDC</td>
</tr>
</tbody>
</table>
EDMDSPAC—EDM pool data space size limit

**NOTE**

This ZPARM applies only to DB2 7.1 and earlier releases.

Use the Modify EDM Pool Dataspace Size Limit panel (Figure 68) or the EDMDSPAC command to specify the upper limit for the size of the EDM pool data space. If storage is constrained in the DBM1 address space, and your site uses dynamic statement caching, you can use this element to move some EDM storage into a data space by specifying a nonzero value for EDMDSPAC.

**Figure 68  Modify EDM Pool Dataspace Size Limit panel**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
**Value** | **Description**
--- | ---
/value/ Maximum size of EDM pool data space. Specify one of the following values:
- a numerical value in the range 0K–2097151K
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–2097151.
  You can specify this value in bytes (B), kilobytes (K), or megabytes (M), but the value must be a multiple of 1K.
/NORESET/ The changes you request remain in effect until the DB2 subsystem is cycled.

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Limit</td>
<td>DSNTIPC</td>
<td>EDMDSPAC</td>
<td>DSN6SPRM</td>
<td>EDMDSPAC</td>
</tr>
</tbody>
</table>
EDMPOOL—EDM pool size

Use the Modify EDM Pool Size panel (Figure 69) or the EDMPOOL command to specify the EDM pool size. The value you specify must be greater than the current EDM pool size because OPERTUNE cannot be used to reduce the EDM pool size.

Figure 69 Modify EDM Pool Size panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET EDMPOOL - ( -value-)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Maximum size of the EDM pool. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 1K–2097151K*</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1K–2097151K.</td>
</tr>
<tr>
<td></td>
<td>* You can specify this value in bytes (B), kilobytes (K), or megabytes (M), but the value must be a multiple of 1K.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>New EDM pool size</td>
<td>DSNTIPC</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDMPOOL</td>
</tr>
</tbody>
</table>
EDMSKPOL—EDM skeleton pool size

Use the Modify EDM Skeleton Pool Size panel (Figure 69 on page 130) or the EDMSKPOL command to specify the size of the EDM skeleton pool. The value is specified in kilobytes and converted to bytes.

Figure 70  Modify EDM Skeleton Pool Size panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)   SET EDMSKPOL    ( - value - )   NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value  | Maximum size of the EDM skeleton pool. Specify one of the following values:  

  - a numerical value in the range 5000K–1048576K*  
  - a delta value  

Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 5000K–1048576K.  

* You can specify this value in bytes (B), kilobytes (K), or megabytes (M), but the value must be a multiple of 1K.  

The DB2 default is 102400. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool Size</td>
<td>DSNTIPC</td>
<td>DSN6SPRM</td>
<td>EDM_SKELETON_POOL</td>
<td></td>
</tr>
</tbody>
</table>
EDMSTMTC—EDM pool statement cache size

Use the Modify EDM Pool Statement Cache Size panel (Figure 71) or the EDMSTMTC command to specify the size of the statement cache that is used by the Environmental Descriptor Manager (EDM).

**Figure 71  Modify EDM Pool Statement Cache Size panel**

![Modify EDM Pool Statement Cache Size panel](image)

**Command syntax and parameters**

```plaintext
IN(DB2ssid@opertuneID) SET EDMSTMTC (value) [NORESET]
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value | The size in kilobytes of the EDM statement cache. Specify one of the following values:  
- a numerical value in the range 5000K–1048576K  
- a delta value  
  Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 5000K–1048576K.  
You specify the value in kilobytes (K), and the macro will convert the value to bytes (B). |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDM statement cache</td>
<td>DSNTIPC</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDMSTMTC</td>
</tr>
</tbody>
</table>
EDPROP—Enable data propagation

Use the Modify Enable DataPropagator (Figure 72) or the EDPROP command to specify whether to use IMS DataPropagator to propagate SQL changes to tables that are defined with the setting DATA CAPTURE CHANGES.

Figure 72  Modify Enable DataPropagator panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Information is saved during the BIND process. When you set DESCSTAT to Y, there is a slight increase in the space a plan or package needs on DASD and in the EDM pool.</td>
</tr>
<tr>
<td>N</td>
<td>Information is not saved during the BIND process.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dprop support</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDPROP</td>
</tr>
</tbody>
</table>
EVALUNC—Evaluate uncommitted data

Use the Modify Evaluate Predicates for Uncommitted Data panel (Figure 73) or the EVALUNC command to enable or disable predicate evaluation for uncommitted data.

**Figure 73  Modify Evaluate Predicates for Uncommitted Data panel**

```
DDTJ DHB4  Modify Evaluate Predicates for Uncommitted Data
Command ===> _________________________________________________________________
Description ...........: EVALUATE UNCOMMITTED DATA
Type the new Evaluate Uncommitted Data Indicator you wish to change to. Then press Enter.
Enable Predicate Evaluation for Uncommitted Data
Enable Predicate Evaluation  Y (Y, N)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) — SET EVALUNC — (Y, N) — NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Predicate evaluation is enabled.</td>
</tr>
<tr>
<td>N</td>
<td>Predicate evaluation is disabled.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate Uncommitted</td>
<td>DSNTIP8</td>
<td>EVALUNC</td>
<td>DSN6SPRM</td>
<td>EVALUNC</td>
</tr>
</tbody>
</table>
EXPLAIN+—Extended Explain generation

Use the Modify Extended Explain Data Generation panel (Figure 74) or the EXPLAIN+ command to specify the DB2 extended Explain data generation indicator. The new value takes effect immediately. The DDL for the extended Explain tables is in the DDTEXPL member of the OPERTUNE CNTL library. Use this element to see additional Explain information that is captured for a DB2 subsystem.

**NOTE**

The EXPLAIN+ element applies only to DB2 version 7 and earlier releases.

**Command syntax and parameters**

```
SET EXPLAIN+ (Y N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Extended Explain is enabled (the COST, REFERENCE, PREDICATE and STRUCTURE tables are populated with the PLAN table when an EXPLAIN is executed).</td>
</tr>
<tr>
<td>N</td>
<td>Extended Explain is disabled (only the PLAN table is populated when an EXPLAIN is executed).</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable extended explain</td>
<td>none</td>
<td>none</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
</tbody>
</table>

**EXTRAREQ—Max extra DRDA query blocks - requester**

Use the Modify Max Extra DRDA Query Blocks - Requestor panel (Figure 75) or the EXTRAREQ command to set the maximum number of extra DRDA query blocks DB2 can request from the remote server. The new value takes effect immediately. You can use this element to limit the number of blocks according to network capacity.

**Figure 75  Modify Max Extra DRDA Query Blocks Requestor panel**

```plaintext
DDTG DBR1            Modify Max Extra DRDA Query Blocks - Requester
Command ===> _________________________________________________________________

Command: CURRENT
Description . . . . . . . . : EXTRA DRDA QUERY BLOCKS
Type the new maximum extra DRDA query blocks value you wish to change to.
Then press Enter.
Max Extra DRDA Query Blocks
Extra REQ Query Blocks . . . (0-100 or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET EXTRAREQ ( --value-- ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra REQ Query Blocks</td>
<td>DSNTIP5</td>
<td>EXTRAREQ</td>
<td>DSN6SYSP</td>
<td>EXTRAREQ</td>
</tr>
</tbody>
</table>

**value**

Maximum number of extra DRDA query blocks DB2 can request from the remote server. Specify one of the following values:

- a numerical value in the range 0–100
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–100.

**NORESET**

The changes you request remain in effect until the DB2 subsystem is cycled.
EXTRASRV—Max extra DRDA query blocks - server

Use the Modify Max Extra DRDA Query Blocks - Server panel (Figure 76) or the EXTRASRV command to set the maximum number of extra DRDA query blocks DB2 can return to the remote requester. The new value takes effect immediately. You can use this element to limit the number of blocks according to network capacity.

Figure 76  Modify Max Extra DRDA Query Blocks - Server panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value         | Maximum number of extra DRDA query blocks DB2 can return from to remote requester. Specify one of the following values:  
  - a numerical value in the range 0–100  
  - a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–100. |
| NORESET       | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra SRV Query Blocks</td>
<td>DSNTP5</td>
<td>EXTRASRV</td>
<td>DSN6SYS</td>
<td>EXTRASRV</td>
</tr>
</tbody>
</table>
EXTSEC—Extended security

Use the Modify Extended Security panel (Figure 77) or the EXTSEC command to specify the content of the error message returned to a network client when a DDF connection request fails because of a security error. This command also specifies whether DDF permits end users to update their RACF password by using the DRDA password change function. This element can be useful if third-party products require the extended security ZPARM to be enabled to provide detailed security-related error messages from DRDA.

Figure 77  Modify Extended Security panel

Command syntax and parameters

IN(DB2ssid@opertuneID)  SET EXTSEC  \( \text{Y or N} \)  NORESET

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Extended security is enabled. DDF returns a detailed error code and allows the user to update the RACF password through DRDA.</td>
</tr>
<tr>
<td>N</td>
<td>Extended security is disabled. DDF returns a generic error code and does not allow the user to update the RACF password through DRDA.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSN6SYSP</td>
<td>EXTSEC</td>
<td>DSN6SYSP</td>
<td>EXTSEC</td>
</tr>
</tbody>
</table>
GBP—Group buffer pool parameters

Use the Modify Group Buffer Pools panel (Figure 78) or the GBP command to specify the attributes of a group buffer pool.

Figure 78  Modify Group Buffer Pools panel

When you change group buffer pool parameters, the change is reflected in all DB2 subsystems in the data sharing group. These subsystems, however, may be under the control of other installations of OPERTUNE. These other OPERTUNE installations will show the correct values for the group buffer pool parameters but will not show that the parameters have been modified by OPERTUNE.

If you stop the OPERTUNE that made the changes, all DB2 subsystems in the data sharing group will revert to the original values, but the OPERTUNEs controlling these subsystems will not reflect the changes. If you make the change with the NORESET option, the other installations of OPERTUNE will show the correct values.

**NOTE**

OPERTUNE manipulates the group buffer pools by issuing GBP commands.

**Command syntax and parameters**
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| n          | Buffer pool ID. Specify one of the following values:  
- 0–49 for 4-KB buffers  
- 8K0–8K9 for 8-KB buffers  
- 16K0–16K9 for 16-KB buffers  
- 32K–32K9 for 32-KB buffers  |
| ratio      | Number of group buffer pool directory entries per data page. Specify one of the following values:  
- a numerical value in the range 1–255  
- a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–255.  
  This value takes effect the next time that the buffer pool is allocated. |
| classt     | Castout class threshold for a page set (the percentage of the total data pages in the group buffer pool that can contain data from a specific page set). Specify one of the following values:  
- a numerical value in the range 0–90  
- a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–90. |
| gbpoolt    | Group buffer pool level threshold (percentage of the total data pages in the group buffer pool that can contain data). Specify one of the following values:  
- a numerical value in the range 0–90  
- a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–90. |
| gbpchkpt   | Group buffer pool checkpoint interval in minutes (the time between checkpoints in the group buffer pool). Specify one of the following values:  
- a numerical value in the range 0–999999  
- a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–999999. |
| autorec    | Automatic recovery. Indicates whether automatic recovery by DB2 takes place when a structure failure occurs or when the connectivity to the group buffer pool is lost by all DB2 members in the group. Specify one of the following values:  
- Y—enables automatic recovery  
- N—disables automatic recovery |
IDTHTOIN—Idle thread timeout interval

Use the Modify Idle Thread Timeout panel (Figure 79) or the IDTHTOIN command to specify the time period that an active DDF or server thread can stay idle before it is canceled by DB2. This limit does not apply to inactive or in-doubt threads.

You can use this element to alleviate resource shortages by setting timeout intervals for DDF server threads that may be holding locks during high-activity times.

Figure 79  Modify Idle Thread Timeout panel
Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET IDTHTOIN ( _ value _ ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| **value** | Idle thread timeout interval (the amount of time (in seconds) that an active DDF or server thread can stay idle before it is canceled by DB2). Specify one of the following values:  
  - a numerical value in the range 1–9999  
  - 0—active threads are allowed to stay active indefinitely  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–9999. |
| **NORESET** | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeout value</td>
<td>DSNTIPR</td>
<td>IDTHTOIN</td>
<td>DSN6FAC</td>
<td>IDTHTOIN</td>
</tr>
</tbody>
</table>
IDXBPOOL—Default index buffer pool

Use the Modify Default Index Buffer Pool panel (Figure 80) or the IDXBPOOL command to specify the default buffer pool to be used for indexes. You can use this element to ensure that newly-created indexes that are installed by applications or users default to specific index buffer pools.

Figure 80  Modify Default Index Buffer Pool panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| bpID           | Buffer pool ID of the buffer pool to be used for indexes. Specify a value in the range BP0–BP49.  
|                | **Note**: The buffer pool used for indexes must be a 4 KB buffer pool.     |
| NORESET        | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Pool Name</td>
<td>DSNTIP1</td>
<td>IDXBPOOL</td>
<td>DSN6SYSP</td>
<td>IDXBPOOL</td>
</tr>
</tbody>
</table>
**IMMEDWRI—Immediate write indicator**

Use the Immediate Write panel (Figure 81) or the IMMEDWRI command to control when DB2 writes updated pages that are dependent on the group buffer pools. This element is only applicable when the DB2 is a data sharing DB2.

**Figure 81  Immediate Write panel**

![Immediate Write panel](image)

**Command syntax and parameters**

![Command syntax](image)

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>NO</td>
<td>Controls when the DB2 writes updated GBP-dependent pages (only applicable to data sharing).</td>
</tr>
<tr>
<td>YES</td>
<td>NO means pages are written at phase 2 of commit (normal activity).</td>
</tr>
<tr>
<td>PH1</td>
<td>PH1 means pages are written at phase 1.</td>
</tr>
<tr>
<td>NORESET</td>
<td>YES means pages are written immediately.</td>
</tr>
<tr>
<td></td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Write</td>
<td>DSN7TIP8</td>
<td>none</td>
<td>DSN6GRP</td>
<td>IMMEDWRI</td>
</tr>
</tbody>
</table>
**IMPDSDEF—Define data sets**

Use the Modify Define Data Sets panel (Figure 82) or the IMPDSDEF command to specify whether the underlying data set for a table space residing in an implicit database is defined at the time the table space is created.

**Figure 82  Modify Define Data sets panel**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Define Data Sets indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN(DB2ssid@opertuneID) SET IMPDSDEF (N Y) NORESET</td>
<td>DEFINE DATA SETS</td>
<td>(Y or N)</td>
</tr>
</tbody>
</table>

**Command syntax and parameters**

**Value** | **Description**  
-----|------------------
*DB2ssid* | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.  
*opertuneID* | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).  
Y | The underlying data set for a table space residing in an implicit database is defined at the time the table space is created.  
N | The data set will not be defined until data is inserted in the table (the DB2 default).  
NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.  

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define data sets</td>
<td>DSNTIP7</td>
<td>IMPDSDEF</td>
<td>DSN6SYSP</td>
<td>IMPDSDEF</td>
</tr>
</tbody>
</table>
IMPTSCMP—Use data compression

Use the Modify Use Data Compression panel (Figure 82) or the IMPTSCMP command to specify whether a table space created in an implicitly created database will use data compression.

**Figure 83  Modify Define Data sets panel**

![Modify Use Data Compression panel]

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET IMPTSCMP (Y,N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DB2ssid</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><code>Y</code></td>
<td>Data compression will be used by table spaces created in an implicitly created database.</td>
</tr>
<tr>
<td><code>N</code></td>
<td>Data compression will not be used by table spaces created in an implicitly created database (the DB2 default).</td>
</tr>
<tr>
<td><code>NORESET</code></td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define data sets</td>
<td>DSNTP7</td>
<td>IMPTSCMP</td>
<td>DSN6SYSYP</td>
<td>IMPTSCMP</td>
</tr>
</tbody>
</table>
IRLMECSA—Maximum CSA storage for IRLM

Use the Modify Maximum CSA Storage for IRLM panel (Figure 84) or the IRLMECSA command to specify a new value for the maximum CSA storage allowed for IRLM use. This element can be altered to control the use of CSA by the IRLM. Lowering this value does not, however, result in freeing CSA storage already acquired by the IRLM. The IRLMECSA element can be useful for preventing DB2 application failures because of a lack of CSA storage.

**WARNING**

Requested storage is obtained immediately. If you reduce this value, the next request for more storage above the new limit is denied, and the thread is terminated abnormally.

Figure 84  Modify Maximum CSA Storage for IRLM panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
Chapter 3  OPERTUNE elements

Value | Description
--- | ---
value | Maximum CSA storage amount for IRLM. Specify one of the following values:
- a value in the range 1M–99M (megabytes)*
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–99.

*N This value can also be specified in kilobytes (nnnK).

NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSA storage</td>
<td>DSNTIPJ</td>
<td>IRLMMCSA</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>
IXQTY—Index space allocation

Use the Modify Index Space Allocation Limit panel (Figure 85) or the IXQTY command to change the amount of space that is used for the DB2 data sets for index spaces. This space is used for index spaces that are created without the USING clause, and includes primary and secondary space allocation.

Figure 85  Modify Index Space Allocation Limit panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) — SET IXQTY — (value) — NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value    | Space in kilobytes for the DB2-defined data sets for index spaces that are created without the USING clause. Specify one of the following values:  
- a numerical value in the range 1–4194304.  
- a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–4194304. |
| NORESET  | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index Space Allocation</td>
<td>DSNTP7</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>IXQTY</td>
</tr>
</tbody>
</table>
LOBVALA—User LOB storage limit

Use the Modify User LOB Storage Limit panel (Figure 86) or the LOBVALA command to specify the maximum amount of storage that can be allotted to each user for storing LOB values.

**Figure 86   Modify User LOB Storage Limit panel**

![Modify User LOB Storage Limit panel](image)

**Command syntax and parameters**

```
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the</td>
</tr>
<tr>
<td></td>
<td>command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or</td>
</tr>
<tr>
<td></td>
<td>the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>LOB storage limit (maximum amount of storage (in kilobytes) that each user</td>
</tr>
<tr>
<td></td>
<td>can use for storing LOB values). Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■ a value in the range 1–2097152</td>
</tr>
<tr>
<td></td>
<td>■ a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values can be expressed numerically (+nn or -nn) or as a percentage</td>
</tr>
<tr>
<td></td>
<td>(+nn% or -nn%). The resulting value must fall in the range 1–2097152.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
```

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage limit</td>
<td>DSNTIP7</td>
<td>LOBVALA</td>
<td>DSN6SYSP</td>
<td>LOBVALA</td>
</tr>
</tbody>
</table>
LOBVALS—System LOB storage limit

Use the Modify System LOB Storage Limit panel (Figure 87) or the LOBVALS command to specify the upper limit for the amount of storage that can be allotted to each system for storing LOB values.

**Figure 87  Modify System LOB Storage Limit panel**

![Modify System LOB Storage Limit panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET LOBVALS ( __ value __ ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>LOB storage limit (maximum amount of storage (in megabytes) that each system can use for storing LOB values). Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■ a value in the range 1–51200</td>
</tr>
<tr>
<td></td>
<td>■ a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–51200.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage limit</td>
<td>DSNTIP7</td>
<td>LOBVALS</td>
<td>DSN6SYSP</td>
<td>LOBVALS</td>
</tr>
</tbody>
</table>
LOGAPSTG—Maximum storage for fast log apply

Use the Modify Maximum Storage for Fast Log Apply panel (Figure 88) or the LOGAPSTG command to specify the maximum amount of DBM1 storage for the Fast Log Apply function to use for all recovery jobs.

You can use this element to ensure there is enough storage for the DB2 Fast Log Apply process, and thus improve recovery times.

Figure 88  Modify Maximum Storage for Fast Log Apply panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Fast log apply storage limit (maximum amount of DBM1 storage (in megabytes) that all recovery jobs can use for the fast log apply function). Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■ a value in the range 1–100</td>
</tr>
<tr>
<td></td>
<td>■ 0–disables fast log apply except during DB2 startup</td>
</tr>
<tr>
<td></td>
<td>■ a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–100.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
## DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Limit</td>
<td>DSNTIPL</td>
<td>LOGAPSTG</td>
<td>DSN6SYSP</td>
<td>LOGAPSTG</td>
</tr>
</tbody>
</table>
LOGTHRSH—Log write threshold

Use the Modify Log Write Threshold panel (Figure 89) or the LOGTHRSH command to specify the new value of the log write threshold, which indicates the number of log buffers to be filled before starting to write. The new value takes effect immediately. If the value is reduced below the number of log buffers waiting to be written, the write takes place when DB2 has the next log buffer ready to write.

**Figure 89  Modify Log Write Threshold panel**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2SSID</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value         | Log wait threshold (the number of log buffers that will be filled before they are written). Specify one of the following values:  
  - a value in the range 1–256  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–256. |
| NORESET       | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
</table>
LRDRTHLD—Long runner reader warning time

Use the Modify Long Runner Reader Warning Time panel (Figure 90) or the LTDRTHLD command to specify the time that an agent can hold a read claim before the task is reported as a long-running reader.

Figure 90  Modify Long Runner Reader Warning Time panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value       | The number of minutes that a read claim can be held by an agent before DB2 issues a warning message to report it as a long-running reader. Specify one of the following values:  
|             | - a value in the range 0–1439  
|             | - 0 indicates that DB2 will not report long-running readers.  
|             | - a delta value  
|             |   Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–1439. |
| NORESET     | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of minutes</td>
<td>DSNTIPE</td>
<td>none</td>
<td>DSN6SYSF</td>
<td>LRDRTHLD</td>
</tr>
</tbody>
</table>
MAINTYPE—Default current table types

Use the Modify Default Maintained Table Types panel (Figure 91) or the MAINTYPE command to specify the types of tables to use for special registers.

Figure 91  Modify Default Maintained Table Types panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
MAXDSN—Maximum number of open data sets

Use the Modify Maximum Number of Open Data Sets panel (Figure 92 on page 159) or the MAXDSN command to specify a new value for the maximum number of open data sets. If the value is increased, the modification takes effect immediately. If the value is reduced, DB2 closes data sets that are defined with CLOSE (YES) on a least-recently referenced basis.

This element can be used to avoid the overhead of extra opens and closes by increasing the threshold for the maximum number of open data sets.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>Type of table that the CURRENT MAINTAINED TABLE TYPES FOR OPTIMIZATION special register uses. Specify one of the listed values: If you use the SQL command “SET CURRENT MAINTAINED TABLE TYPES FOR OPTIMIZATION” to set the table type for the special register, the MAINTYPE parameter setting will be superseded. - SYSTEM allows query rewrite using system-maintained materialized query tables (SYSTEM) when CURRENT REFRESH AGE is set to ANY. - USER allows query rewrite by using user-maintained materialized query tables when CURRENT REFRESH AGE is set to ANY. - ALL allows query rewrite by using both system-maintained and user-maintained materialized query tables.</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
<tr>
<td>USER</td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td></td>
</tr>
<tr>
<td>NORESET</td>
<td></td>
</tr>
</tbody>
</table>
**Figure 92  Modify Maximum Number of Open Data Sets panel**

```
DDTAMMD 1             Modify Maximum Number of Open Data Sets
Command ===>  

Description .............: MAXDSN PARAMETER
Type the new MAXDSN parameters that you wish to change to.
Then press Enter.

Maximum Open Data Sets Parameter
Maximum number ........  (1-100000 or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)   SET MAXDSN ( value ) NONRESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Maximum open data sets (maximum number of data sets that can be open concurrently). Specify one of the following values:</td>
</tr>
</tbody>
</table>

- a value in the range 1–32767 (DB2 version 7)
- a value in the range 1–100000 (DB2 version 8 and later)
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–32767. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number</td>
<td>DSNTIPC</td>
<td>NUMCONDB</td>
<td>DSN6SPRM</td>
<td>DMAX</td>
</tr>
</tbody>
</table>
MAXKEEPD—KEEPDYNAMIC SQL save limit

Use the Modify System KEEPDYNAMIC Limit panel (Figure 93) or the MAXKEEPD command to specify the maximum number of prepared dynamic SQL statements that can be saved past a commit point by all threads in the DB2 subsystem that use the KEEPDYNAMIC(EXECUTABLE) bind option.

Figure 93  Modify System KEEPDYNAMIC Limit panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET MAXKEEPD (- value -) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value       | SQL save limit (maximum number of prepared dynamic SQL statements that can be saved past a commit point by all threads in the DB2 subsystem that use the KEEPDYNAMIC(EXECUTABLE) bind option). Specify one of the following values:  
  - a numerical value in the range 0–65535  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–65535. |
| NORESET     | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Save Limit</td>
<td>none</td>
<td>MAXKEEPD</td>
<td>DSN6SPRM</td>
<td>MAXKEEPD</td>
</tr>
</tbody>
</table>
MAXLOCKS—Maximum number of locks

Use the Modify Maximum Number of Locks panel (Figure 94) or the MAXLOCKS command to specify new maximum values for locks per user and locks per table space (or locks per table, for segmented table spaces).

**Figure 94  Modify Maximum Number of Locks panel**

MAXLOCKS per user is the maximum number of locks an application can hold against all table spaces in the system. If the maximum is reached, DB2 terminates the thread. The IRLM needs 128–256 bytes per lock. If the number of locks per user is increased, the value takes effect immediately.

**WARNING**

If this value is decreased below the current number of locks a user holds, the next request for a lock by that user will be denied, and the thread will be terminated abnormally.

MAXLOCKS per table space applies only to tables defined with LOCKSIZE ANY and is the maximum number of locks an application can hold against a single table space before lock escalation occurs.

If you increase the number of locks per table space, the value takes effect immediately (applies only to LOCKSIZE ANY). If this value is decreased below the current number of locks outstanding for a table space, the next request for a lock on this table space causes lock escalation.

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET MAXLOCKS ( tableLocks ,userLocks ) NORESET
```
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max per table(space)</td>
<td>DSNTIPJ</td>
<td>IRLMLKTS</td>
<td>DSN6SPRM</td>
<td>NUMLKTS</td>
</tr>
<tr>
<td>Max per user</td>
<td>DSNTIPJ</td>
<td>IRLMLKUS</td>
<td>DSN6SPRM</td>
<td>NUMLKUS</td>
</tr>
</tbody>
</table>
MAXOFILR—Maximum open file references

Use the Modify Maximum Open File References panel (Figure 95) or the MAXOFILR command to specify the maximum number of data sets that can be open concurrently for processing of LOB file references.

**Figure 95  Modify Maximum Open File References panel**

![Modify Maximum Open File References panel](image)

**Command syntax and parameters**

```
<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Open Data Sets</td>
<td>DSNTIPE</td>
<td>MAXOFILR</td>
<td>DSN6SYSP</td>
<td>MAXOFILR</td>
</tr>
</tbody>
</table>
```

**DB2 parameter values**

- **DB2ssid**: DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.
- **opertuneID**: OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).
- **value**: Maximum number data sets that can be open concurrently for processing of LOB file references. Specify one of the following values:
  - a numerical value in the range 0–CTHREAD value (maximum number of concurrent threads)
  - a delta value
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–CTHREAD value
- **NORESET**: The changes you request remain in effect until the DB2 subsystem is cycled.
MAXTEMPS - Maximum temporary space

Use the Modify Maximum Temporary Space panel (Figure 96) or the MAXTEMPS command to specify the maximum number of megabytes of temporary storage in the work file database that can be used by a single agent at any given time for all temporary tables.

**Figure 96  Modify Maximum Temporary Space panel**

```
DDTAMTP       Modify Maximum Temporary Space
Command ===> _________________________________________________________________

Description . . . . . . . :   MAXIMUM TEMPORARY SPACE

Type the new Maximum Temporary Space value you wish to change. Then press Enter.

Max Temp Space
Number of megabytes . . . . : ___________ (0-2147483647 or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET MAXTEMPS  (-- value --)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Maximum number of megabytes of temporary storage in the work file database that can be used by a single agent at any given time for all temporary tables. Specify one of the following values:</td>
</tr>
</tbody>
</table>

- 0—no limit is enforced
- a numerical value in the range 1–2147483647
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–2147483647

| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max temp space</td>
<td>DSNTIP9</td>
<td>MAXTEMPS</td>
<td>DSN6SPRM</td>
<td>MAXTEMPS</td>
</tr>
</tbody>
</table>
**MAXTHDS—Maximum number of threads**

Use the Modify Maximum Threads panel (Figure 97) or the MAXTHDS command to specify new values for the maximum number of threads for the different thread types. You can use these values to control the amount of work that can originate from the different environments (local, remote, TSO, batch).

If you specify an increase to the number of threads, queued or new threads are started immediately. If you specify a reduction to the number of threads below the number already active, the next request to start a thread is denied, and all active threads are terminated normally.

**Figure 97  Modify Maximum Threads panel**

<table>
<thead>
<tr>
<th>Description</th>
<th>MAXIMUM # OF THREADS (BY TYPE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type the new maximum thread values that you wish to change to. Then press Enter. Release dependent limits are checked and enforced by the target OPERTUNE system.</td>
<td></td>
</tr>
</tbody>
</table>

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET MAXTHDS - (local,remote,tso)
                   (batch,remoteConnected) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>local</td>
<td>Maximum number of local concurrent threads allowed. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 1–2000</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–2000.</td>
</tr>
<tr>
<td>remote</td>
<td>Maximum number of concurrent active DBAT threads. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 0–1999</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–1999.</td>
</tr>
<tr>
<td>tso</td>
<td>Maximum number of concurrent connections from TSO foreground. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 1–2000</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–2000.</td>
</tr>
<tr>
<td>batch</td>
<td>Maximum number of concurrent connections from batch jobs and utilities. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 1–2000</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–2000.</td>
</tr>
<tr>
<td>remoteConnected</td>
<td>Maximum number of concurrent remote connections supported. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 0–150000</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–150000.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max users</td>
<td>DSNTIPE</td>
<td>NUMCONCR</td>
<td>DSN6SYSP</td>
<td>CTHREAD</td>
</tr>
<tr>
<td>Max Remote Active</td>
<td>DSNTIPE</td>
<td>NUMCONRM</td>
<td>DSN6SYSP</td>
<td>MAXDBAT</td>
</tr>
<tr>
<td>Max TSO Connect</td>
<td>DSNTIPE</td>
<td>NUMCONTS</td>
<td>DSN6SYSP</td>
<td>IDFORE</td>
</tr>
<tr>
<td>Max Batch Connect</td>
<td>DSNTIPE</td>
<td>NUMCONBT</td>
<td>DSN6SYSP</td>
<td>IDBACK</td>
</tr>
<tr>
<td>Max Remote Connected</td>
<td>DSNTIPE</td>
<td>CONDBAT</td>
<td>DSN6SYSP</td>
<td>CONDBAT</td>
</tr>
</tbody>
</table>

NORESET: The changes you request remain in effect until the DB2 subsystem is cycled.
**MAXTYPE1—Maximum Type1 inactive threads**

Use the Modify Max Type1 Inactive Threads panel (Figure 98) or the MAXTYPE1 command to specify the upper limit for the number of type 1 inactive threads that DB2 allows.

Threads that access a remote location with three-part names or threads that are bound with KEEP_DYNAMIC(YES) are eligible for type 1 inactive status. A large number of type 1 inactive threads may adversely affect system performance.

**Figure 98  Modify Max Type1 Inactive Threads panel**

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Threads</td>
<td>DSNTIPR</td>
<td>MAXTYPE1</td>
<td>DSN6FAC</td>
<td>MAXTYPE1</td>
</tr>
</tbody>
</table>
MAXZDES—Maximum ZIVLEMPEL dictionary entries

Use the Modify Max Zivlempel Dictionary Entries panel (Figure 99) or the MAXZDES command to specify the maximum number of zivlempel entries that will be used to build the compression dictionary for a table space.

Figure 99  Modify Max Zivlempel Dictionary Entries panel

Command syntax and parameters

Value | Description
---|---
DB2ssid | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.
opertuneID | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).
512 1024 2048 4096 8192 | Maximum number of zivlempel dictionary entries (entries that will be used to build the compression dictionary for a table space). Specify one of the listed values.
NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.

DB2 parameter values
MGEXTSZ—Manage extent size

Use Modify Manage Extent Size panel (Figure 100) or the MGEXTSZ command to specify whether DB2 should use a sliding scale to size user-provided secondary space allocation quantities (SECQTY) for DB2-managed data sets. If the sliding scale is used (ENABLED=Y), secondary space allocation quantities will be sized so that the maximum data set size will more likely be reached before secondary extents are exhausted.

Figure 100  Modify Manage Extent Size panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
whether secondary extent allocations will be automatically sized according to a sliding scale. Specify one of the following values:

- **Y** indicates that secondary extents will be sized according to a sliding scale. When the sliding scale is used, secondary extent allocations that are allocated earlier are smaller than those that are allocated later, until a maximum allocation is reached. The maximum allocation is 127 cylinders for data sets with a maximum size of 16 GB or less, and 559 cylinders for data sets with a maximum size of 32 GB or 64 GB.

- **N** indicates that secondary extent allocations will be manually managed.

**NORESET** Changes you request remain in effect until the DB2 subsystem is cycled.

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize extent sizing</td>
<td>DSNIP7</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>MGEXTSZ</td>
</tr>
</tbody>
</table>
MINDVSCL—Minimum scale for decimal division

Use the Modify Minimum Scale for Decimal Division panel (Figure 101) or the MINDVSCL command to set a minimum scale for the result of decimal division.

Figure 101  Modify Minimum Scale for Decimal Division panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>NONE</td>
<td>There is no minimum division scale.</td>
</tr>
<tr>
<td>3</td>
<td>The minimum division scale is 3.</td>
</tr>
<tr>
<td>6</td>
<td>The minimum division scale is 6.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Scale</td>
<td>DSNTIPE</td>
<td>MINDVSCL</td>
<td>DSN6SPRM</td>
<td>MINDVSCL</td>
</tr>
</tbody>
</table>
MINSTOR—Actively manage thread storage

Use the Modify Actively Manage Thread Storage panel (Figure 102) or the MINSTOR command to enable or disable active DB2 storage management that minimizes the storage that is used by an individual thread.

Figure 102  Modify Actively Manage Thread Storage panel

Command syntax and parameters

Value | Description
------|-------------------------------------------------|
\textit{DB2ssid} | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies. \\
\textit{opertuneID} | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job). \\
\textit{Y} | Active DB2 storage management is enabled. \\
\textit{N} | Active DB2 storage management is disabled. \\
\textit{NORESET} | The changes you request remain in effect until the DB2 subsystem is cycled.

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Active Storage Mgmt</td>
<td>DSNTIPE</td>
<td>SPRMMSTG</td>
<td>DSN6SPRM</td>
<td>MINSTOR</td>
</tr>
</tbody>
</table>
MSGLIMIT—DISPLAY Command message limit

Use the Modify Display Command Message Limit panel (Figure 103) or the MSGLIMIT command to control the maximum number of output messages DB2 will write as a result of a DB2 DISPLAY command. The new value is used immediately.

Figure 103  Modify Display Command Message Limit panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET MAGLIMIT (-value-) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Maximum number of output messages DB2 will write as a result of a DB2 DISPLAY command.</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 10–32767</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 10–32767.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message limit</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>
MXDTCACH—Data caching memory

Use the Modify Data Caching Memory panel (Figure 104) or the MXDTCACH command to specify the maximum number of megabytes of virtual memory allocated for data caching.

**Figure 104  Modify Data Caching Memory panel**

![Modify Data Caching Memory panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET MXDTCACH (-value-) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value     | Maximum number of megabytes of virtual memory allocated for data caching. Specify one of the following values:  

- 0—DB2 does not use data caching  
- a numerical value in the range 1–512  
- a delta value  
Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–512.  
The DB2 default is 20. |

**NORESET** The changes you request remain in effect until the DB2 subsystem is cycled.

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data caching memory</td>
<td>DSNTIP8</td>
<td>MXDTCACH</td>
<td>DSN6SPRM</td>
<td>MXDTCACH</td>
</tr>
</tbody>
</table>
**MXNUMCUR—Maximum open cursors**

Use the Modify Maximum Open Cursors panel (Figure 105) or the MXNUMCUR command to specify the maximum number of open cursors for a thread that can be open at a DB2 site. If an application attempts to open a cursor once the maximum number of cursors has been reached, the statement will fail.

![Figure 105 Modify Maximum Open Cursors panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET MXNUMCUR -( value ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value     | Maximum number of open cursors that can be open at a given DB2 site per thread. If an application attempts to open a cursor once the maximum number of cursors has been reached, the statement will fail. Specify one of the following:  
|           | a numerical value in the range 0–99999  
|           | a delta value  
|           | Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–99999. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max open cursors</td>
<td>DSTIPX</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>MAX_NUM_CUR</td>
</tr>
</tbody>
</table>
MXPKGOPS—Maximum concurrent package operations

Use the Modify Maximum Concurrent Package Operations panel (Figure 107) or the MXSPKGOPS command to specify the maximum number of concurrent package requests that can be processed simultaneously.

Figure 106  Modify Maximum Concurrent Package Operations panel

```
DDTAMXK 2                        Modify Max Concurrent Package Operations
Command ===> _________________________________________________________________
Description .................: MAXIMUM PACKAGE OPERATIONS

Type the new Maximum Concurrent Package Operations value you wish to change to. Then Press Enter.

Concurrent Package Operations
  Concurrent Operations . . __ (1 - 20)
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID) --- SET MXPKGOPS ( value ) --- NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Maximum number of concurrent package requests that can be processed simultaneously. Specify a numerical value in the range 1–20.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent Operations</td>
<td></td>
<td></td>
<td>DSN6SPRM</td>
<td>MAX_CONCURRENT_PKG_OPS</td>
</tr>
</tbody>
</table>
MXSTPROC—Maximum stored procs

Use the Modify Maximum Stored Procs panel (Figure 107) or the MXSTPROC command to specify the maximum number of stored procedure instances that can be in use by a single thread.

**Figure 107  Modify Maximum Stored Procs panel**

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET MXSTPROC —(- value —) [NORESET]
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value | Maximum number of stored procedure instances that can be open at a given DB2 site per thread. If an application attempts to open a cursor once the maximum number of stored procedures has been reached, the statement will fail. Specify one of the following values:  
  - a numerical value in the range 0–99999  
  - a delta value  
  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–99999. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max stored procs</td>
<td>DSNTIPX</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>MAX_ST_PROC</td>
</tr>
</tbody>
</table>
NPGTHRSH—NPAGE threshold

Use the Modify NPAGE Threshold panel (Figure 108) or the NPGTHRSH command to specify the tables for which DB2 favors matching index access.

The NPGTHRSH parameter lets you specify that DB2 uses special access path selection for tables under a given size. In this situation, you should run RUNSTATS again after the table is populated. Otherwise, you can use the NPGTHRSH parameter to cause DB2 to favor matching index access over a table space scan and over nonmatching index access.

**NOTE**

Keep in mind that in some cases, matching index access can be more costly than a table space scan or nonmatching index access. Specify a small value for NPGTHRSH (10 or less) to limit the number of tables for which DB2 favors matching index access.

**Figure 108 Modify NPAGE Threshold panel**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN(DB2ssid@opertuneID)</td>
<td>SET NPGTHRSH</td>
<td>COST</td>
</tr>
<tr>
<td>NORESET</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>COST</td>
<td>DB2 selects the access path based on cost, and no tables qualify for special handling This is the default.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPAGE Threshold</td>
<td>none</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>NPGTHRSH</td>
</tr>
</tbody>
</table>
OJPERFEH—Outer join performance enhancements

Use the Modify Outer Join Performance Enhancements panel (Figure 109) or the OJPERFEH command to specify whether to disable performance enhancements for outer join operations.

Figure 109  Modify Outer Join Performance Enhancements panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET OJPERFEH (N Y NORESET)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the</td>
</tr>
<tr>
<td></td>
<td>command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or</td>
</tr>
<tr>
<td></td>
<td>the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Whether to enable performance enhancements for outer join operations. Specify</td>
</tr>
<tr>
<td></td>
<td>one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■  Y indicates that performance enhancements are not enabled.</td>
</tr>
<tr>
<td></td>
<td>■  N indicates that performance is not saved during the BIND process.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>OJPERFEH</td>
<td>none</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>OJPERFEH</td>
</tr>
</tbody>
</table>
OPTHINTS—Optimization hints

Use the Modify Optimization Hints panel (Figure 110) or the OPTHINTS command to specify whether users can pass access path hints to DB2 (in the form of plan table rows) that can influence the access path that is selected for certain queries. Use this element if you want to use an old access path if the new access path does not perform as well after a plan or package is rebound and the path reformulated.

Figure 110  Modify Optimization Hints panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET OPTHINTS — ( Y — N )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Users can pass access path hints.</td>
</tr>
<tr>
<td>N</td>
<td>Users cannot pass access path hints. This is the default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIP4</td>
<td>OPTHINTS</td>
<td>DSN6SPRM</td>
<td>OPTHINTS</td>
</tr>
</tbody>
</table>
OUTBUFF—Output log buffer size

Use the Modify Log Output Buffer Pool Size panels (Figure 111) or the OUTBUFF command to specify the buffer size of the output log. This is the amount of storage that the Log Manager uses when writing data to active log data sets.

The Log Manager constructs 4-KB buffers. The value that you specify is the total number of KBs, and the value must be a multiple of four. For delta amounts, batch and MVS console issued commands must be a multiple of four. If the value is not a multiple of four, the value is rounded to the nearest multiple of four.

**Figure 111  Modify Log Output Buffer Pool Size panel**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value       | Buffer size of the output log (in kilobytes). Specify one of the following values:  
|             |   - a numerical value in the range 40–400000 (in multiples of 4)           |
|             |   - a delta value  
|             |     - Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 40–400000 and be a multiple of 4. If the value specified is not a multiple of 4, OPERTUNE will round to the nearest valid value. |
| NORESET     | The changes you request remain in effect until the DB2 subsystem is cycled.   |
PADIX—Pad new indexes

Use the Modify Pad New Indexes panel (Figure 112) or the PADIX command to specify whether indexes are padded that have at least one varying-length column will be padded. If an index is padded, performance is improved because the data can be accessed from the indexes instead of the data page.

Figure 112  Modify Pad New Indexes panel

---

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET PADIX (Y, N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Index padding is enabled. The data that is retrieved from the index is padded with blanks to the maximum width of the column.</td>
</tr>
</tbody>
</table>
Chapter 3  OPERTUNE elements

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pad indexes by default</td>
<td>DSNTIPE</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>PADIX</td>
</tr>
</tbody>
</table>

**PARAMDEG—Maximum parallelism degree**

Use the Modify Maximum Parallelism Degree panel (Figure 113) or the PARAMDEG command to control the degree of parallelism for a parallel group. This value specifies the maximum number of parallel threads that can be spawned to service a single query. You can use this command to take advantage of parallelism while controlling virtual storage growth.

**Figure 113  Modify Maximum Parallelism Degree panel**

```
DDTG DB11  Modify Maximum Parallelism Degree  Command ===>
Command: CURRENT
Description ...........: MAXIMUM PARALLELISM DEGREE
Type the new Maximum Parallelism Degree you wish to change to. Then press Enter
Maximum Parallelism Degree Parameter
Parallelism Degree ....... _____ (0-254 or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET PARAMDEG (-- value --)  NORESET
```
PARTKEYU—Allow update of partition keys

Use the Allow Update of Partition Keys panel (Figure 114) or the PARTKEYU command to specify whether values in columns that participate in partitioning keys can be updated.

In updates on partitioning keys, drains are required that can cause contention in high concurrency DB2 subsystems. PARTKEYU can be used to alleviate this cause of contention and to disable updates of partitioning keys.

**Figure 114  Modify Allow Update of Partition Keys panel**

```
DOTG DB11          Modify Allow Update of Partition Keys
Command ===> _________________________________________________________________

Description . . . . . . . : ALLOW UPDATE OF PARTITION KEYS

Type the new Allow Update of Partition Keys indicator you wish to change to.  Then press Enter.

  Allow Update of Partition Keys
Update of Partition Keys . . (YES, NO, SAME)
```
## Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET PARTKEYU (Y N SAME) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><strong>Y</strong></td>
<td>Values in partitioning key columns can be updated.</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>Values in partitioning key columns cannot be updated.</td>
</tr>
<tr>
<td><strong>SAME</strong></td>
<td>Values in partitioning key columns can be updated if the update leaves the row belonging to the same partition.</td>
</tr>
<tr>
<td><strong>NORESET</strong></td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

## DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of Partition Keys</td>
<td>DSNTIP4</td>
<td>SPRMPKYU</td>
<td>DSN6SPRM</td>
<td>PARTKEYU</td>
</tr>
</tbody>
</table>
PCLOSE—Pseudo close interval

Use the Modify Pseudo Close Interval panel (Figure 115) or the PCLOSE command to specify the pseudo close interval. This interval determines when a table space is switched from an internal status of read-write to read-only. Pseudo close flushes the table space buffers, and writes a record to SYSLGRNG.

Figure 115  Modify Pseudo Close Interval panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) \rightarrow SET PCLOSE \rightarrow (checkpointFreq, checkpointTime) \rightarrow NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| checkpointFreq*  | Checkpoint frequency (the number of checkpoints that can be taken while there is no activity on a table before a pseudo close occurs). Specify one of the following values:  
|                  | ■ a numerical value in the range 1–32767                                                                                                 |
|                  | ■ a delta value                                                                                                                                 |
|                  |  
|                  | Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–32767.    |
Chapter 3 OPERTUNE elements

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>DSNTIPL</td>
<td>PCLOSEN</td>
<td>DSN6SYSP</td>
<td>PCLOSEN</td>
</tr>
<tr>
<td>Time</td>
<td>DSNTIPL</td>
<td>PCLOSET</td>
<td>DSN6SYSP</td>
<td>PCLOSET</td>
</tr>
</tbody>
</table>

PFBP—Buffer pool prefetch value

Use the Modify PFBP panel (Figure 116 on page 190) or the PFBP command to change the buffer pool prefetch quantity. The prefetch quantity is the number of pages read per I/O in the sequential prefetch mode. The new value takes effect immediately and is used for the next read request. Increasing the prefetch quantity usually enhances performance by reducing the number of I/Os; however, the buffer pool must be appropriately sized. Reducing the prefetch quantity increases I/O, but might make better use of buffer pools, especially when the applications access only a small number of pages at a time.

Because OPERTUNE treats the buffer pool size and buffer pool prefetch size as two distinctly different elements, you can change their values independently. This allows you to set a buffer pool size to a large value while keeping the associated prefetch value small, or set the buffer pool size to a small value while using a large buffer pool prefetch quantity.
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefetch quantity</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>
PKGLDTOL—Tolerate package not found

Use the Modify Tolerate Package Not Found panel (Figure 117) or the PKGLDTOL command to specify whether packages must be bound at the requester if the application contains statements that are processed at the requester (for distributed applications).

**NOTE**

This installation parameter applies only to DB2 version 7.1. In DB2 version 7, for distributed applications, you must bind a package at the requester if your application contains statements that are processed at the requester.

**Figure 117  Modify Tolerate Package Not Found panel**

Command syntax and parameters

**Value** | **Description**  
--- | ---  
DB2ssid | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.  
opertenID | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).  
Y | Packages do not need to be bound at the requester if the application contains statements that are processed at the requester.  
N | Packages must be bound at the requester if the application contains statements that are processed at the requester. This is the default.  
NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerate Not Found</td>
<td>none</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>PKGLDTOL</td>
</tr>
</tbody>
</table>

PLANMGMT—Type of plan management

Use the Modify Type of Plan Management panel (Figure 118) or the PLANMGMT command to specify the type of plan management that will be used by default when the PLANMGMT option is not specified in the REBIND command.

**NOTE**

This installation parameter applies only to DB2 version 9.1 and subsequent releases.

**Figure 118  Modify Type of Plan Management panel**

```
Ddotamgm T Modify Type of Plan Management
Command ===> ________________________________
Description ............ : TYPE OF PLAN MANAGEMENT

Type the new Type of Plan Management you wish to change to. Then Press
Enter.
Plan Management Type
Management Type ________ (OFF, BASIC, EXTENDED)
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID) — SET PLANMGMT (OFF, BASIC, EXTENDED) — NORESET
```
### Value Description

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>OFF</td>
<td>Plans will not be managed when no PLANMGMT is specified in the REBIND command.</td>
</tr>
<tr>
<td>BASIC</td>
<td>Basic plan management will be used when no PLANMGMT is specified in the REBIND command.</td>
</tr>
<tr>
<td>EXTENDED</td>
<td>Extended plan management will be used when no PLANMGMT is specified in the REBIND command.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Type</td>
<td>PLANMGMT</td>
<td>DSN6SPRM</td>
<td>PLANMGMT</td>
<td></td>
</tr>
</tbody>
</table>
Pool thread timeout

Use the Modify Pool Thread Timeout panel (Figure 119) or the POOLINAC command to specify the approximate time that a database access thread (DBAT) can remain idle in the pool before it is terminated. A database access thread in the pool counts as an active thread against maximum remote activity. The thread can hold locks, but it does not have any cursors.

If your site uses DDF thread pooling support (DDF type 2 inactive threads), you can set POOLINAC to a value greater than the typical inactive time to avoid the overhead that is required to create a new database access thread.

Figure 119 Modify Pool Thread Timeout panel

<table>
<thead>
<tr>
<th>Command syntax and parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET POOLINAC (value) (DB2ssid@opertuneID)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
Pool DBAT timeout value (the approximate time, in seconds, that a DBAT can remain idle in the pool before it terminates). Specify one of the following values:

- 0—the DBAT is terminated if there are sufficient threads in the pool to process the existing type 2 inactive threads
- a numerical value in the range 1–9999
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–9999.

NORESET The changes you request remain in effect until the DB2 subsystem is cycled.

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARAM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seconds</td>
<td>DSNTIP5</td>
<td>POOLINAC</td>
<td>DSN6FAC</td>
<td>POOLINAC</td>
</tr>
</tbody>
</table>
PTASKROL—Roll up parallel task accounting trace

Use the Modify Roll Up Parallel Task Accounting Trace panel (Figure 120) or the PTASKROL command to specify whether to roll up a query parallel task’s accounting trace into the originating task’s accounting trace.

**NOTE**

This installation parameter applies only to DB2 version 7.1.

Figure 120  Modify Roll Up Parallel Task Accounting Trace panel

Command syntax and parameters

![Command syntax and parameters](image)

Value | Description
--- | ---
DB2ssid | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.
opertuneID | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).
Y | DB2 generates an accounting trace record that summarizes accounting information for all parallel tasks. This is the DB2 default.
N | Each parallel task produces its own accounting trace.
NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>none</td>
<td>PTASK</td>
<td>DSN6SYSP</td>
<td>PTASKROL</td>
</tr>
</tbody>
</table>
QUIESCE—Archive log quiesce period

Use the Modify Archive Log Quiesce Period panel (Figure 121) or the QUIESCE command to specify the default value for the maximum amount of time (in seconds) that the ARCHIVE LOG command waits for a full system quiesce. You can use this element to change the quiesce period to prevent impacting system performance.

Figure 121 Modify Archive Log Quiesce Period panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET QUIESCE ( value ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the</td>
</tr>
<tr>
<td></td>
<td>command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or</td>
</tr>
<tr>
<td></td>
<td>the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Quiesce time (number of seconds the ARCHIVE LOG command waits for a full</td>
</tr>
<tr>
<td></td>
<td>system quiesce). Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>a numerical value in the range 0–999</td>
</tr>
<tr>
<td></td>
<td>a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage</td>
</tr>
<tr>
<td></td>
<td>(+nn% or -nn%). The resulting value must fall in the range 0–999.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum time period</td>
<td>DSNTPMA</td>
<td>none</td>
<td>DSN6ARVP</td>
<td>QUIESCE</td>
</tr>
</tbody>
</table>
READTAPE—Archive log tape units

Use the Modify Archive Log Tape Units panel (Figure 122) or the READTAPE command to specify the maximum number of dedicated tape units that can be allocated by DB2 to read archived log data concurrently and the length of time an allocated tape unit can remain unused before it is deallocated.

**Figure 122  Modify Archive Log Tape Units panel**

![Modify Archive Log Tape Units panel](image)

**Command syntax and parameters**

\[
\begin{array}{c}
\text{IN(DB2ssid@opertuneID)} \text{--- SET READTAPE ---} ( \text{DEFAULT} \text{---}) \text{---} \text{NORESET} \text{---}
\end{array}
\]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>DEFAULT</td>
<td>All READTAPE values are set from the original ZPARM values.</td>
</tr>
</tbody>
</table>
| count     | Number of tape units. Specify one of the following values:  
  - a numerical value in the range 1–99  
  - a delta value  
    Delta values can be expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–99. |
### Chapter 3 OPERTUNE elements

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>parameter source/tape units</td>
<td>DSNTIPA</td>
<td>ARCHMRTU</td>
<td>DSN6LOGP</td>
<td>MAXRTU</td>
</tr>
<tr>
<td>Deallocation time</td>
<td>DSNTIPA</td>
<td>ARCHDEAP</td>
<td>DSN6LOGP</td>
<td>DEALLCT</td>
</tr>
</tbody>
</table>
RECALL—Automatic HSM recall switch

Use the Modify Automatic HSM Recall Indicator panel (Figure 123) or the RECALL command to switch on and off the HSM recall capability. The new value takes effect immediately and will be used when the next attempt is made to access a migrated DB2 table space.

Figure 123  Modify Automatic HSM Recall Indicator panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET RECALL (Y N) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>HSM automatic recall is enabled.</td>
</tr>
<tr>
<td>N</td>
<td>HSM automatic recall is disabled.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic recall</td>
<td>DSNTIPO</td>
<td>RECALL</td>
<td>DSN6SPRM</td>
<td>RECALL</td>
</tr>
</tbody>
</table>
RECALLTM—HSM recall delay

Use the Modify HSM Recall Delay panel (Figure 124) or the RECALLTM command to specify a new value for the HSM recall delay. The HSM recall delay is the maximum length of time (in seconds) that DB2 will wait for an HSM recall of an archived data set before returning a resource-unavailable return code. The new value takes effect immediately and is used when the next attempt is made to access a migrated DB2 table space.

You can use RECALLTM to increase the recall delay time if DB2 applications that access archived data sets fail with a resource-unavailable return code.

Figure 124 Modify HSM Recall Delay panel

```
DDTG DBI1 Modify HSM Recall Delay
Command ===> _________________________________________________________________
Description . . . . . . . . : MAX WAIT TIME FOR HSM RECALL
Type the new maximum recall time value that you wish to change to. Then press Enter.
HSM Recall Time Parameter
Max time (in seconds) . . . . . . (0-32767 or delta)
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET RECALLTM (-seconds-) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| seconds   | HSM recall time (number of seconds that DB2 waits for an HSM recall). Specify one of the following values:  
|           | a numerical value in the range 0–32767  
|           | a delta value  
|           | Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–32767. |
| NORESET   | The changes you request remain in effect until the DB2 subsystem is cycled. |
DB2 parameter values

REFSHAGE—Default current refresh age

Use the Modify Default Current Refresh Age panel (Figure 125) or the REFSHAGE command to specify the default value for the CURRENT REFRESH AGE special register if no value is explicitly set using the SQL statement SET CURRENT REFRESH AGE. If you accept the default value of 0, query rewrite using deferred materialized query tables is disabled. The special register CURRENT REFRESH AGE specifies the maximum refresh age that a materialized query table can have.

Figure 125  Modify Default Current Refresh Age panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
Chapter 3  OPERTUNE elements

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current refresh age</td>
<td>DSNTIP8</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>REFSHAGE</td>
</tr>
</tbody>
</table>

RELCURHL—Release locks for cursor

Use the Modify Release Locks for Cursor panel (Figure 126) or the RELCURHL command to enable or disable the bypassing of lock promotion of data locks for CURSOR WITH HOLD. Lock promotion holds a lock across a commit until the next commit. Bypassing lock promotion releases a lock at the current commit.

Reducing the duration of held locks in applications that use CURSOR WITH HOLD can reduce lock contention that leads to threads timing out.

Figure 126  Modify Release Locks for Cursor panel

```
DDTG DB11                   Modify Release Locks for Cursor
Command ===> _________________________________________________________________
Command: CURRENT
Description . . . . . . . : RELEASE LOCKS FOR CURSOR
Type the new Release Locks for Cursor Indicator you wish to change to.
Then press Enter.
Bypass Release Locks for Cursor
   Enabled . . . . . . . . . . ( Y or N )
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET RELCURHL ( Y N ) NORESET
```
Use the Modify Restore Tape Unit panel (Figure 128) or the RESTTPUN command to specify the maximum number of tape units or tape drives that the RESTORE SYSTEM utility can allocate when restoring a system-level backup that has been dumped to tape.

You can override this value by executing the RESTORE SYSTEM utility statement with the TAPEUNITS keyword.

**Figure 127  Modify DDF Resync Interval panel**

```
DDTAMPU N               Modify Restore Tape Units       ALL VALUE FIELDS EMPTY
Command ===> CURRENT

Description . . . . . . . . : RESTORE TAPE UNITS

Type the new Restore Tape Units value you wish to change to. Then Press Enter.

Restore Tape Units
  Restore Tape Units . . . .          (NOLIMIT, 1 to 255)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET RESTTPUN (NOLIMIT, value) NORESET
```
RESYNC—DDF resync interval

Use the Modify DDF Resync Interval panel (Figure 128) or the RESYNC command to specify the time interval between resynchronization periods or the time during which in-doubt logical units of work involving DB2 and a partner logical unit are processed. Raising the resync value can reduce the overhead that is associated with the check for “in-doubt” DDF threads.

**Figure 128  Modify DDF Resync Interval panel**

```
DDTG DB11
Command ===> Modify DDF Resync Interval

Description . . . . . . : RESYNC INTERVAL PARAMETER

Type the new DDF resync interval value that you wish to change to. Then press Enter.

Distributed Data Facility Parameter
  Resync Interval . . . . . _____ (1-99 or delta)
```
Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET RESYNC (minutes) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| minutes      | Resynchronization interval (number of minutes between resynchronization periods). Specify one of the following values:  
  - a numerical value in the range 1–99  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–99. |
| NORESET      | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resync interval</td>
<td>DSNTIPR</td>
<td>RESYNC</td>
<td>DSN6FAC</td>
<td>RESYNC</td>
</tr>
</tbody>
</table>

RETLWAIT—Retained lock timeout multiplier

Use the Modify Retained Lock Timeout Multiplier panel (Figure 129) or the RETLWAIT command to specify whether a transaction should wait for incompatible retained locks.

Figure 129  Modify Retained Lock Timeout Multiplier panel

```
D0TG DBI1 Modify Retained Lock Timeout Multiplier
Command ===> _________________________________________________________________
Command: CURRENT
Description . . . . . . . . : RETAINED LOCK TIMEOUT MULTIPLIER

Type the new Retained Lock Timeout Multiplier you wish to change to. Then press Enter.

Retain Lock Timeout Multiplier . . . . . . (Y, N, 0 - 254 or delta)
```
Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET RETLWAIT (Y N value) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value   | Timeout multiplier (determines how long a transaction waits for incompatible retained locks). This value is multiplied by the connection’s normal timeout multiplier. Specify one of the following values:  
  ♦ 0—transactions do not wait for incompatible retained locks  
  ♦ a numerical value in the range 1–254  
  ♦ a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–254. |
| Y       | Lock or change requests will wait for incompatible retained locks to be available.                |
| N       | Lock or change requests will not wait for incompatible retained locks to be available.            |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.                     |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeout Multiplier</td>
<td>DSNTIPI</td>
<td>SPRMWAI</td>
<td>DSN6SPRM</td>
<td>RETLWAIT</td>
</tr>
</tbody>
</table>
RETVLCFK—Retrieve variable data from index key

Use the Modify Retrieve Variable Column panel (Figure 130) or the RETVLCFK command to determine whether DB2 can return data from an index key for a varying length column. Applications can perform poorly if varying-length column data which is part of an index is retrieved from the data pages. To improve performance, you can use RETVLCFK to enable index-only access of varying-length column data.

**Figure 130  Modify Retrieve Variable Column panel**

![Modify Retrieve Variable Column panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET RETVLCFK ( [ Y | N ] ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><strong>Y</strong></td>
<td>Enable retrieval of data by index key (retrieved data will be padded with blanks to the maximum length of the column). This value results in better performance.</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>Disable retrieval of data by index key (DB2 must go to the data page to retrieve data; data will not be padded with blanks).</td>
</tr>
<tr>
<td><strong>NORESET</strong></td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIP4</td>
<td>RETVLCFK</td>
<td>DSN6SPRM</td>
<td>RETVLCFK</td>
</tr>
</tbody>
</table>
RIDBLKS—Max RID block

Use the Modify Max RID Block panel (Figure 131) or the RIDBLKS command to specify the number of blocks to use for the RID pool. The sorting of record identifiers (RIDs) during list prefetch, hybrid joins, and access through multiple indexes occurs in the RID pool. The value specified is the maximum number of RID storage blocks that can be allocated at any time. No storage is allocated until needed at run time.

**NOTE**
The RIDBLKS element is valid for DB2 version 8 and above.

**Figure 131  Modify Max RID Block panel**

![Diagram of Modify Max RID Block panel]

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET RIDBLKS (value) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>RID blocks</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>MAXRBLK</td>
</tr>
</tbody>
</table>
RIDPOOL—RID pool size

Use the Modify Ridpool Size panel (Figure 132) or the RIDPOOL command to specify the amount of storage needed for the RID pool. The sorting of record identifiers (RIDs) during list prefetch, hybrid joins, and access through multiple indexes occurs in the RID pool. The RID pool is limited to 1000M.

The value specified is the maximum amount of RID storage that can be allocated at any time. No storage is allocated until needed at run time.

Figure 132  Modify Ridpool Size panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridpool size</td>
<td>DSNTIPC</td>
<td>RIDPOOL</td>
<td>DSN6SPRM</td>
<td>MAXRBLK</td>
</tr>
</tbody>
</table>
RLFAUTH—AUTHID for RLF tables

Use the Modify Authid for RLF Tables panel (Figure 133) or the RLFAUTH command to dynamically change the authorization ID or creator ID for the resource limit specification tables. The DB2 default is SYSIBM. The new value takes effect immediately.

Figure 133  Modify Authid for RLF Tables panel

![Modify Authid for RLF Tables panel]

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET RLFAUTH ( - authID - ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>authID</td>
<td>Authorization ID for the RLF tables. There are two cases:</td>
</tr>
<tr>
<td></td>
<td>DB2 version 7: Authorization IDs must be 1–8 characters.</td>
</tr>
<tr>
<td></td>
<td>DB2 version 8 and later: Authorization IDs must be 1–128 characters.*</td>
</tr>
<tr>
<td></td>
<td>The first character must be a letter of the alphabet or a national character ($, #, or @). The remaining characters can be alphanumeric or national. The default is SYSIBM.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

*OPERTUNE panels display only the first 8 characters of authorization IDs. If you want to change the auth ID to a longer name, type the first 8 characters in the Authorization ID field and press Enter. When the Command Confirmation panel is displayed, you can use the EDIT command to modify the authorization ID to a longer value before submitting the command.
## DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization ID</td>
<td>DSNTIPP</td>
<td>RLFAUTH</td>
<td>DSN6SYSP</td>
<td>RLFAUTH</td>
</tr>
</tbody>
</table>
**RLFERR—RLF error action**

Use the Modify RLF Error Action panel (Figure 134) or the RLFERR command to specify what action DB2 will take when access to the resource limit specification tables fails and the Resource Limit Facility is initialized. You can set RLFERR to NORUN to terminate all dynamic SQL statements immediately with an SQL error code.

**Figure 134  Modify RLF Error Action panel**

![Modify RLF Error Action panel](image)

**Command syntax and parameters**

```
SET RLFERR (NOLIMIT, NORUN, servUnits) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>NOLIMIT</td>
<td>Ad hoc SQL statements are allowed to execute with no limit imposed.</td>
</tr>
<tr>
<td>NORUN</td>
<td>Ad hoc SQL statements are terminated.</td>
</tr>
<tr>
<td>servUnits</td>
<td>The RLF limit in CPU service units. Specify a numerical value in the range 1–5000000.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLF Error Action value</td>
<td>DSNTIPO</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>RLFERR</td>
</tr>
</tbody>
</table>
RLFERRD—RLF remote error action

Use the Modify RLF Remote Error Action panel (Figure 135) or the RLFERRD command to specify what action DB2 takes when access to the resource limit specification tables fails and the Resource Limit Facility is initialized for a remote query.

You can set RLFERRD to NORUN to terminate all dynamic SQL statements immediately with an SQL error code.

**Figure 135  Modify RLF Remote Error Action panel**

- **Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>NOLIMIT</td>
<td>Ad hoc SQL statements are allowed to execute with no limit imposed. This is the default.</td>
</tr>
<tr>
<td>NORUN</td>
<td>Ad hoc SQL statements are terminated.</td>
</tr>
<tr>
<td>servUnits</td>
<td>The RLF limit in CPU service units. Specify a numerical value in the range 1–5000000.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLFT Error Action value</td>
<td>DSNTIPR</td>
<td>none</td>
<td>DSN6FAC</td>
<td>RLFERRD</td>
</tr>
</tbody>
</table>

*RLIMIT—Resource limit facility*

Use the Modify Resource Limit Facility panel (Figure 136) or the RLIMIT command to change the DB2 Resource Limit Facility Table ID dynamically. The table ID is composed of one or two alphanumeric characters. Confirmation of this command invokes the DB2 START RLIMIT command. The new value takes effect immediately.

Although this value can be changed using a DB2 command, this element is included in OPERTUNE so that you can use the RLIMIT specification in a group profile, changing the RLIMIT with other elements at predetermined times using schedules.

**NOTE**

See the IBM DB2 Command and Utility Reference for more information about the Resource Limit Facility and the table suffix.
### DB2 Parameter Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table suffix</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>ID</td>
<td>Resource Limit Facility (RLF) table ID. Specify 1–2 alphanumeric characters.</td>
</tr>
<tr>
<td>--</td>
<td>Issues a STOP RLIMIT command.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
RRFRMDMP—Restore/recover from dump

Use the Modify Restore/Recover Dump panel (Figure 137) or the RRFRMDMP command to specify whether the system-level backup that has been chosen as the recovery base for the RESTORE SYSTEM and the RECOVER utilities should be used from the disk copy of the system-level backup (N) or from the dump on tape (Y).

You can override the RESTORE/RECOVER setting by executing the RESTORE SYSTEM utility statement or the RECOVER utility statement with the FROMDUMP keyword.

Figure 137 Modify Restore/Recover Dump panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the</td>
</tr>
<tr>
<td></td>
<td>command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or</td>
</tr>
<tr>
<td></td>
<td>the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The system-level backup for the RESTORE SYSTEM and the RECOVER utilities is</td>
</tr>
<tr>
<td></td>
<td>from the dump on tape.</td>
</tr>
<tr>
<td>N</td>
<td>The system-level backup for the RESTORE SYSTEM and the RECOVER utilities is</td>
</tr>
<tr>
<td></td>
<td>from the disk copy of the system-level backup (the DB2 default).</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable</td>
<td>DSNTIP6</td>
<td>RESRECFD</td>
<td>DSN6SPRM</td>
<td>RESTORE_RECOVER_FROMDUMP</td>
</tr>
</tbody>
</table>
RRULOCK—Use U lock for repeatable reads

Use the Modify Use U Locks For Repeatable Reads panel (Figure 138) or the RRULOCK command to specify whether repeatable read (RR) or read stability (RS) cursors will use the U (UPDATE) lock to access a table. If NO is specified, the lock mode for operations with RR or RS is S (SHARE).

If MAINVIEW for DB2 reports indicate that they are spending a lot of time waiting for update locks, you can set RRULOCK to access the tables using S locks, and increase the concurrency of the reports.

Figure 138 Modify Use U Locks For Repeatable Reads panel

Command syntax and parameters

IN(DB2ssid@opertuneID) SET RRULOCK ( Y | N ) NORESET

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Use the U (UPDATE) lock to access a table</td>
</tr>
<tr>
<td>N</td>
<td>Use the S (SHARE) lock to access a table</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZP ARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNTIPI</td>
<td>RRULOCK</td>
<td>DSN6SPRM</td>
<td>RRULOCK</td>
</tr>
</tbody>
</table>
SARGSWRP—Index access for sideways reference predicate

Use the Modify Index Access for Sideways Reference Predicate panel (Figure 139) or the SARGSWRP command to specify whether index access is enabled for queries containing nested correlated table references.

Figure 139  Modify Index Access for Sideways Reference Predicate panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET SARGSWRP  ( Y, N )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Index access is enabled for queries containing nested correlated table references.</td>
</tr>
<tr>
<td>N</td>
<td>Index access is not enabled for queries containing nested correlated table references. This is the default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Index Access</td>
<td>none</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>SARGSWRP</td>
</tr>
</tbody>
</table>
**SEQCACH—3990 cache mode**

Use the Modify 3990 Cache Mode panel (Figure 140) or the SEQCACH command to specify the cache mode that DB2 will use in its channel program for reading data from 3990-3 or 3990-6 controllers.

Specifying SEQ allows DB2 to define an extent of tracks from which data can be promoted to cache before a read-miss occurs. This allows the storage controllers to improve the hit ratio. Performance is also improved by allowing data to be moved between DASD and cache by cylinders instead of by tracks.

**Figure 140  Modify 3990 Cache Mode panel**

![Modify 3990 Cache Mode panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET SEQCACH (SEQ | BYPASS)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>SEQ</td>
<td>DB2 can define an extent of tracks from which data can be promoted to cache in advance before a read-miss occurs.</td>
</tr>
<tr>
<td>BYPASS</td>
<td>DB2 reads directly from DASD.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode specification</td>
<td>DSNTIPE</td>
<td>SEQCACH</td>
<td>DSN6SPRM</td>
<td>SEQCACH</td>
</tr>
</tbody>
</table>
SEQUPRES—Utility cache

Use the Modify Utility Cache panel (Figure 141) or the SEQPRES command to indicate whether certain utilities should allow data to remain in 3390 cache longer when reading data. Utilities that scan a nonpartitioned index followed by an update of a subset of the pages in the index are affected.

Figure 141  Modify Utility Cache panel

Command syntax and parameters

```
Command: CURRENT
Description . . . . . . . . : UTILITY CACHE
Type the new Utility Cache value you wish to change to. Then press Enter.
Utility Cache Parameter
   Enabled . . . . . . . . . ( Y or N )
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The DB2 utility prefetch reads remain in the cache longer.</td>
</tr>
<tr>
<td>N</td>
<td>The DB2 utilities use the cache the same way as any other application.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>DSNITYPE</td>
<td>SEQPRES</td>
<td>DSN6SPRM</td>
<td>SEQPRES</td>
</tr>
</tbody>
</table>
SITETYPE—Site type

Use the Modify Site Type panel (Figure 142) or the SITETYPE command to specify whether the current system is a local site or a recovery site. This information is used by the COPY and RECOVER utilities when accessing the SYSCOPY table.

Figure 142  Modify Site Type panel

Command syntax and parameters

IN(DB2ssid@opertuneID) — SET SITETYPE (LOCALSITE RECOVERYSITE) NORESET

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>LOCALSITE</td>
<td>The current system is at a local site (the site where multiple image copies are made).</td>
</tr>
<tr>
<td>RECOVERYSITE</td>
<td>The current system is the recovery site named as an alternative for recovery purposes.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type specification</td>
<td>DSNTIPO</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>SITETYP</td>
</tr>
</tbody>
</table>
SJMXPOOL—Starjoin memory pool

Use the Modify Starjoin Memory Pool panel (Figure 143) or the SJMXPOOL command to specify the maximum size of the virtual memory pool for star join queries.

**Figure 143  Modify Starjoin Memory Pool panel**

```
DDTJ DHB4 Modify Starjoin Memory Pool ALL VALUE FIELDS EMPTY
Command ===> _________________________________________________________________
Command: CURRENT
Description . . . . . . . . : STARJOIN MEMORY POOL
Type the new Starjoin Memory Pool value that you wish to change to. Then Press Enter.
Starjoin Memory Pool Starjoin Memory Pool . . . (. . . 0 - 1024 Megabytes or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET SJMXPOOL (- value -) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value   | Maximum size in MB of the virtual memory pool for star join queries. Specify one of the following values:  
  - 0–no storage is allocated for star join queries  
  - a numerical value in the range 1-1024  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–1024. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star join max pool</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>STARJOIN</td>
</tr>
</tbody>
</table>
SJTABLES—Star join table threshold

Use the Modify Star Join Table Threshold panel (Figure 144) or the SJTABLES command to establish the Star Join threshold value. The new value takes effect immediately.

**Figure 144  Modify Star Join Table Threshold panel**

![Figure 144 Modify Star Join Table Threshold panel]

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET SJTABLES  (- value -)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value        | Determines when star join will be considered. Specify one of the following values:  
  - 0—star join is considered if the query block has 10 or more tables (default)  
  - a numerical value in the range 1–3 (star join is always considered)  
  - a numerical value in the range 256–32767  
  - a numerical value in the range 4–255 (star join is considered if the query block has at least the specified number of tables) |

NORESET  The changes you request remain in effect until the DB2 subsystem is cycled.

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star Join Table Threshold</td>
<td>none</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>SJTABLES</td>
</tr>
</tbody>
</table>
SKIPUNCI—Ignore uncommitted inserts

Use the Modify Ignore Uncommitted Inserts panel (Figure 145) or the SKIPUNCI command to specify whether cursors that are bound with read or cursor stability will ignore uncommitted inserts that are made by other transactions.

**Figure 145  Modify Ignore Uncommitted Inserts panel**

![Modify Ignore Uncommitted Inserts panel](image)

**Command syntax and parameters**

\[
\begin{align*}
\text{SET SKIPUNCI} & \quad \text{NORESET} \\
\hline
\text{Y} & \text{IN}\left(DB2ssid@opertuneID\right) \\
\text{N} & \hline
\end{align*}
\]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>DB2ssid</em></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><em>opertuneID</em></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td><em>Y</em></td>
<td>Uncommitted inserts are treated as if they have not arrived yet. In a data sharing environment, uncommitted inserts of transactions that were designated as spawning transactions will be treated in this manner. Immediate write occurs for inserts, updates, and deletes, but readers do not wait for the outcome of uncommitted inserts.</td>
</tr>
<tr>
<td><em>N</em></td>
<td>Uncommitted inserts are evaluated for return with or without waiting for committedness according to the value that you set in the EVALUATE UNCOMMITTED field.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skip uncomm inserts</td>
<td>DSN6SPRM</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>SKIPUNCI</td>
</tr>
</tbody>
</table>
SMF89—Measured usage tracking

Use the Modify Measured Usage Tracking panel (Figure 146) or the SMF89 command to specify whether DB2 will use detailed tracking of measured usage.

Figure 146 Modify Measured Usage Tracking panel

Command syntax and parameters

**Value** | **Description**
---|---
**DB2ssid** | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.
**opertuneID** | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).
**Y** | DB2 will perform detailed usage tracking by activating the SMF type 89 record. When this record option is activated, only high-level tracking is recorded in the SMF type 89 record. When SMF89 is set to YES, DB2 invokes a z/OS service on every entry or exit into or out of DB2 to ensure accurate tracking.
**N** | DB2 does not perform detailed measured usage tracking. Selecting NO reduces CPU usage, but also increases the amount of time spent in DB2 as measured by SMF 89.
**NORESET** | The changes you request remain in effect until the DB2 subsystem is cycled.

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage pricing</td>
<td>none</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>SMF89</td>
</tr>
</tbody>
</table>
**SMSDCFL—SMS dataclass for files**

Use the Modify SMS Dataclass Name For Files panel (Figure 147) or the SMSCFL command to specify the SMS data class keyword for all table space data sets.

**Figure 147  Modify SMS Dataclass Name For Files panel**

![Figure 147](image)

**NOTE**

If SMS is *not* active and a value is specified for SMSDCFL, all corresponding table space data sets might not be created, and one or more of the following messages might be issued:

- DSNP009I
- IDC3183I
- DSNP010I
- DSNP002I
- DSNP016I

If SMS is active, you are responsible for ensuring that these specified SMS data class names are set up correctly.

**Command syntax and parameters**

```
SET SMDCFL (value -NONE-) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Specify the name of the SMS data class for table spaces (1–8 alphanumeric characters).</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS Dataclass Name</td>
<td>none</td>
<td>SPRMDCFL</td>
<td>DSN6SPRM</td>
<td>SMSDCFL</td>
</tr>
</tbody>
</table>

**SMSDCIX—SMS dataclass for indexes**

Use the Modify SMS Dataclass Name For Indexes panel (Figure 148) or the SMSDCIX command to specify the SMS data class keyword for all table space data indexes.

**Figure 148  Modify SMS Dataclass Name For Indexes panel**

- NONE- The SMS data class name is removed.
- NORESET The changes you request remain in effect until the DB2 subsystem is cycled.

**NOTE**

If SMS is not active and a value is specified for SMSDCIX, all corresponding index data sets might not be created, and you might encounter one or more of the following messages:

- DSNP009I
- IDC3183I
- DSNP010I
- DSNP002I
- DSNP016I

If SMS is active, you are responsible for ensuring that these specified SMS data class names are set up correctly.
Command syntax and parameters

```
IN(DB2ssid@opertuneID)     SET SMSDCIX ( value ) -NONE- NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Specify the name of the SMS data class for indexes (1–8 alphanumeric characters).</td>
</tr>
<tr>
<td>-NONE-</td>
<td>The SMS data class name is removed.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS Dataclass Name</td>
<td>none</td>
<td>SPRMDCIX</td>
<td>DSN6SPRM</td>
<td>SMSDCIX</td>
</tr>
</tbody>
</table>
SORTPOOL—Sort pool size

Use the Modify Sortpool Size panel (Figure 149) or the SORTPOOL command to specify the amount of storage needed for the sort pool. The sort pool value is used by DB2 as the maximum size of a sort area allocated when a cursor is opened for a SELECT statement that requires sorting.

Because the size of the sort pool can affect sort efficiency, you can improve performance by using SORTPOOL to allow each concurrent sort user a larger sort area.

Figure 149  Modify Sortpool Size panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST Parameter</th>
<th>ZPARM macro</th>
<th>ZPARM Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sortpool Size</td>
<td>DSNTIPC</td>
<td>SORTPOOL</td>
<td>DSN6SPRM</td>
<td>SRTPOOL</td>
</tr>
</tbody>
</table>

Sort pool size (the maximum size of a sort area allocated when a cursor is opened for a SELECT statement that requires sorting). Specify one of the following values:
- number of kilobytes in the range 240K–64000K* in 1K increments
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 240K–64000K and be a multiple of 1K.

*N This value can also be specified in bytes (B) or megabytes (M), but the value specified must be a multiple of 1K.

NORESET The changes you request remain in effect until the DB2 subsystem is cycled.
STARJOIN—Starjoin enablement/ratio

Use the Modify Starjoin Enablement Status/Ratio panel (Figure 150) or the STARJOIN command to enable or disable starjoin processing.

**Figure 150  Modify Starjoin Enablement status/ratio panel**

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>DISABLE</td>
<td>Star join process is not active.</td>
</tr>
<tr>
<td>ENABLE</td>
<td>Star join processing is active.</td>
</tr>
<tr>
<td>value</td>
<td>Star join processing is active, and DB2 will use the ratio of the star join table and the largest dimension table. Specify a value from 1 to 32768.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star join queries</td>
<td>DSN6SPRM</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>STARJOIN</td>
</tr>
</tbody>
</table>
STATCLUS—Clustering statistics

Use the Modify Runstats Clustering Stats panel (Figure 153) or the STATCLUS command to specify the type of clustering statistics that will be collected by the RUNSTATS utility.

When there are duplicate values of the clustering index or the data is in reverse clustering order, the ENHANCED option results in better SQL access paths. The STANDARD option produces the same clustering statistics as version 8.

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET STATCLUS ( ENHANCED ) ( STANDARD ) ( NORESET )
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>ENHANCED</td>
<td>The ENHANCED algorithm is used to collect clustering statistics. This option can result in changes to many access paths. This is the DB2 default.</td>
</tr>
<tr>
<td>STANDARD</td>
<td>The STANDARD algorithm is used to collect clustering statistics.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithm Type</td>
<td>DSNTIP6</td>
<td>STATCLUS</td>
<td>DSN6SPRM</td>
<td>STATCLUS</td>
</tr>
</tbody>
</table>
STATFREQ—Statistics time interval

Use the Modify Statistics Records Frequency panel (Figure 152) or the STATFREQ command to specify a new value for the statistics time interval. This action allows systems programmers and DBAs to dynamically control the frequency of statistics record generation. This value takes effect after the next set of statistics records is generated.

Figure 152 Modify Statistics Records Frequency panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET STATFREQ (value) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value      | Statistics interval (time interval (in minutes) at which statistics records are written). Specify one of the following values:  
|            | ■ a numerical value in the range 1–1440  
|            | ■ a delta value  
|            | Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–1440. |
| NORESET    | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation parameter</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time interval (minutes)</td>
<td>DSNTIPN</td>
<td>OPSTATIM</td>
<td>DSN6SYSP</td>
<td>STATIME</td>
</tr>
</tbody>
</table>
**STATHIST—Collection of statistics history**

Use the Modify Collection of Statistics History panel (Figure 153) or the STATHIST command to determine which historical statistics will be collected.

**Figure 153  Modify Collection of Statistics History panel**

![Modify Collection of Statistics History panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET STATHIST (NONE, SPACE, ALL, or ACCESSPATH) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>NONE</td>
<td>Changes made in the catalog by DB2 are not recorded. This is the default.</td>
</tr>
<tr>
<td>SPACE</td>
<td>Inserts and updates made by DB2 to space-related catalog statistics are recorded.</td>
</tr>
<tr>
<td>ACCESSPATH</td>
<td>Inserts and updates made by DB2 to access path-related catalog statistics are recorded.</td>
</tr>
<tr>
<td>ALL</td>
<td>All inserts and updates made by DB2 in the catalog are recorded.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics History Collection</td>
<td>DSNTIPO</td>
<td>STATHIST</td>
<td>DSN6SPRM</td>
<td>STATHIST</td>
</tr>
</tbody>
</table>
STATROLL—Aggregate partition statistics

Use the Aggregate Partition Statistics panel (Figure 154) or the STATROLL command to specify whether the RUNSTATS utility will aggregate partition-level statistics. Enabling the aggregation of partition-level statistics can help the DB2 optimizer choose better access paths.

**Figure 154  Modify Aggregate Partition Statistics panel**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The RUNSTATS utility will aggregate partition-level statistics.</td>
</tr>
<tr>
<td>N</td>
<td>The RUNSTATS utility will not aggregate partition-level statistics. This is the DB2 default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Stats Aggregation</td>
<td>DSNtiPO</td>
<td>SPRMSTRL</td>
<td>DSN6SPRM</td>
<td>STATROLL</td>
</tr>
</tbody>
</table>
STATSINT—RTS statistics timer interval

Use the Modify RTS Statistics Timer Interval panel (Figure 155) or the STATSINT command to set the RTS Tables Time Interval value (the time that DB2 waits before attempting to write out page set statistics to the real-time statistics tables). The new value takes effect immediately.

Figure 155  Modify RTS Statistics Timer Interval panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET STATSINT ( -value-)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DB2ssid</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| `value`    | Real-time statistics timer interval (the time (in minutes) that DB2 waits before attempting to write out page set statistics to the real-time statistics tables). Specify one of the following values:  
  * a numerical value in the range 1–1440
  * a delta value
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–1440. |
| `NORESET`  | The changes you request remain in effect until the DB2 subsystem is cycled.                                                                  |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timer Interval</td>
<td>DSNTIP0</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>STATSINT</td>
</tr>
</tbody>
</table>

Chapter 3  OPERTUNE elements  239
STORMXAB—Stored procedure maximum abends

Use the Modify Stored Proc Allowable Abends panel (Figure 156) or the STORMXAB command to specify the number of abends that a stored procedure can incur before DB2 rejects SQL CALL statements to that stored procedure.

After the limit is exceeded, a START PROCEDURE command must be issued before the procedure can be used again. Specifying 0 for this element causes DB2 to reject SQL CALLs to the stored procedure the first time it abends.

Figure 156  Modify Stored Proc Allowable Abends panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET STORMXAB  (value)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The number of abends that a stored procedure can incur before DB2 rejects SQL CALL statements to that stored procedure. Specify one of the following values: ■ a numerical value in the range 1–255 ■ 0—SQL CALL statements are rejected at the first abend of the stored procedure ■ a delta value Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–255.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowable abend count</td>
<td>DSNTIPX</td>
<td>STORMXAB</td>
<td>DSN6SYSP</td>
<td>STORMXAB</td>
</tr>
</tbody>
</table>
STORPROC—Stored procedure MVS procedure name

Use the Modify Stored Procedure Proc Name panel (Figure 157) or the STORPROC command to specify the MVS procedure name that DB2 uses to start the Stored Procedures address space. After the name is changed, it can be made effective by issuing a DB2 STOP PROCEDURE command followed by a START PROCEDURE command.

Figure 157  Modify Stored Procedure Proc Name panel

![Figure 157 Modify Stored Procedure Proc Name panel](image)

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET STORPROC  (  value  -NONE- )  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Specify a name consisting of 1–8 alphanumeric characters.</td>
</tr>
<tr>
<td>-NONE-</td>
<td>The stored procedure address space is not started.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS procedure name</td>
<td>DSNTIPX</td>
<td>STORPROC</td>
<td>DSN6SYSP</td>
<td>STORPROC</td>
</tr>
</tbody>
</table>
**STORTIME—Stored procedure timeout value**

Use the Modify Stored Procedure Timeout panel (Figure 158) or the STORTIME command to specify the number of seconds that DB2 waits before timing out an SQL CALL waiting for a stored procedure. Specifying 0 for this element instructs DB2 to avoid timing out callers of stored procedures.

**Figure 158  Modify Stored Procedure Timeout panel**

![Modify Stored Procedure Timeout panel](image)

**Command syntax and parameters**

```sql
IN(DB2ssid@opertuneID) SET STORTIME (value) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value | The number of seconds that DB2 waits before timing out an SQL CALL waiting for a stored procedure. Specify one of the following values:  
- a numerical value in the range 1–1800  
- 0—callers of stored procedures are not timed out  
- a delta value  
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–1800. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeout value</td>
<td>DSNTIPX</td>
<td>STORTIME</td>
<td>DSN6SYSP</td>
<td>STORTIME</td>
</tr>
</tbody>
</table>
SUPERRS—Suppress logrec recording

Use the Modify Suppress Logrec Recording panel (Figure 159) or the SUPERRS command to suppress the recording of recoverable data system abends, also known as soft errors, to the SYS1.LOGREC data set.

Figure 159 Modify Suppress Logrec Recording panel

Command syntax and parameters

```
SET SUPERRS \{ Y, N \} NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Errors are not recorded to the SYS1.LOGREC data set.</td>
</tr>
<tr>
<td>N</td>
<td>Errors are recorded to the SYS1.LOGREC data set.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Logrec Rec Supp</td>
<td>DSNTIPM</td>
<td>SPRMSAE</td>
<td>DSN6SPRM</td>
<td>SUPERRS</td>
</tr>
</tbody>
</table>
SVOLARC—Archive unit/volume count of 1

Use the Modify Archive Unit/Volume Count of 1 panel (Figure 160) or the SVOLARC command to indicate whether UNIT and VOLUME counts of 1 should always be specified when allocating new archive log data sets on DASD. If users are having problems with the volume count that is specified by DB2, and they manage the allocation of the archive log data sets outside of DB2, use SVOLARC to enable a volume count of 1 when allocated a new DASD archive log data set.

Figure 160  Modify Archive UNIT/VOLUME COUNT OF 1 panel

```
DDTG DE11 Modify Archive UNIT/VOLUME COUNT OF 1
Command ===> ____________________________ Command: CURRENT
Description . . . . . . . . : ARCHIVE UNIT AND VOLUME COUNT OF 1

Type the new Archive UNIT/VOLUME COUNT OF 1 indicator you wish to change to. Then press Enter.

Enable Archive Unit/Volume Count of 1
  Enable UNIT/VOLUME COUNT OF 1 _ (Y, N)
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET SVOLARC ( Y N ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The UNIT and VOLUME counts are always 1 when allocating new archive data sets on DASD.</td>
</tr>
<tr>
<td>N</td>
<td>The archive allocation is not changed.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Unit/volume Count Of 1</td>
<td>none</td>
<td>none</td>
<td>DSN6ARVP</td>
<td>SVOLARC</td>
</tr>
</tbody>
</table>
SYNCVAL—Synchronize DB2 statistics

Use the Modify Synchronize Statistics Recording panel (Figure 161) or the SYNCVAL command to specify whether DB2 statistics recording is synchronized with some part of the hour. Synchronization can occur at the beginning of the hour or at any number of minutes past the hour, up to 59.

**Figure 161  Modify Synchronize Statistics Recording panel**

![Modify Synchronize Statistics Recording panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET SYNCVAL (N, 0 - 59 or delta) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>N</td>
<td>No synchronization takes place. This is the DB2 default.</td>
</tr>
<tr>
<td>0</td>
<td>Statistics recording is synchronized to the beginning of the hour.</td>
</tr>
<tr>
<td>value</td>
<td>Statistics recording is synchronized to the specified number of minutes past the hour.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sync Stat Indicator</td>
<td>DSNTPIN</td>
<td>SYNCVAL</td>
<td>DSN6SYSP</td>
<td>SYNCVAL</td>
</tr>
</tbody>
</table>
SYSADM—Installation SYSADM IDs

Use the Modify Install SYSADM IDs panel (Figure 162) or the SYSADM command to specify new installation SYSADM1, SYSADM2, or both IDs. This action allows you to shift install SYSADM responsibilities from one DBA or systems programmer to another dynamically without cycling DB2. The new value takes effect immediately.

**NOTE**

This modification is subject to OPERTUNE security checking. Only authorized OPERTUNE systems and users are allowed to perform SYSADM modification.

**Figure 162  Modify Install SYSADM IDs panel**

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET SYSADMIN (authID1, authID2, authID1, authID2) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>authID1</td>
<td>An authorization ID with installation SYSADM authority.*</td>
</tr>
<tr>
<td>authID2</td>
<td>An second authorization ID with installation SYSADM authority.*</td>
</tr>
</tbody>
</table>
NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.

*For DB2 version 7, authorization IDs must be 1–8 characters.
  For DB2 version 8 and later, authorization IDs must be 1–128 characters.†

The first character must be a letter of the alphabet or a national character ($, #, or @). The remaining characters can be alphanumeric or national.

† OPERTUNE panels display only the first 8 characters of authorization IDs. If you want to change the auth ID to a longer name, type the first 8 characters in the Install SYSADM ID field and press Enter. When the Command Confirmation panel is displayed, you can use the EDIT command to modify the authorization ID to a longer value before submitting the command.

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install SYSADM ID-1</td>
<td>DSNTIPP</td>
<td>PROTADMN</td>
<td>DSN6SPRM</td>
<td>SYSADM</td>
</tr>
<tr>
<td>Install SYSADM ID-2</td>
<td>DSNTIPP</td>
<td>PROTADM2</td>
<td>DSN6SPRM</td>
<td>SYSADM2</td>
</tr>
</tbody>
</table>
SYSLEV BK—System-level backups

Use the Modify Modify System Level Backups panel (Figure 161) or the SYSLEV BK command to specify whether the RECOVER utility will use system-level backups as a recovery base for object-level recoveries (in addition to image copies and concurrent copies). Specify NO if you do not take system-level backups with the BACKUP SYSTEM utility. For more information about the RECOVER utility, see the DB2 Utility Guide and Reference.

Figure 163  Modify System Level Backups panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET SYSLEV BK ( Y N ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>The RECOVER utility uses system-level backups as a recovery base for object-level recoveries.</td>
</tr>
<tr>
<td>N</td>
<td>The RECOVER utility does not use system-level backups as a recovery base for object-level recoveries. This is the BD2 default.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable System Level Backups</td>
<td>DSNTIP6</td>
<td>SYSLVLBK</td>
<td>DSN6SPRM</td>
<td>SYSTEM_LEVEL_BACKUPS</td>
</tr>
</tbody>
</table>
SYSPR—Installation SYSPR IDs

Use the Modify Install SYSPR IDs panel (Figure 164) or the SYSPR command to specify new installation SYSPR1, SYSPR2, or both IDs. This action allows you to shift SYSPR responsibilities from one DBA, operator, or systems programmer to another dynamically without cycling DB2. The new value takes effect immediately.

**NOTE**

This modification is subject to OPERTUNE security checking. Only authorized OPERTUNE systems and users are allowed to perform the SYSPR modification.

**Figure 164  Modify Install SYSPR IDs panel**

**Command syntax and parameters**

\[ \text{IN(DB2ssid@opertuneID)} \text{ - SET SYSPR} \left( \begin{array}{l} \text{authID1,} \\
\text{authID2} \\
\text{authID1,authID2} \end{array} \right) \text{ - NORESET} \]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>authID1</td>
<td>An authorization ID with installation SYSPR authority.*</td>
</tr>
<tr>
<td>authID2</td>
<td>A second authorization ID with installation SYSPR authority.*</td>
</tr>
</tbody>
</table>
ELEMENT DESCRIPTIONS

NORESET - The changes you request remain in effect until the DB2 subsystem is cycled.

*For DB2 version 7, authorization IDs must be 1–8 characters.
For DB2 version 8 and later, authorization IDs must be 1–128 characters.†

The first character must be a letter of the alphabet or a national character ($, #, or @). The remaining characters can be alphanumeric or national.

† OPERTUNE panels display only the first 8 characters of authorization IDs. If you want to change the auth ID to a longer name, type the first 8 characters in the Install SYSOPR ID field and press Enter. When the Command Confirmation panel is displayed, you can use the EDIT command to modify the authorization ID to a longer value before submitting the command.

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install SYSOPR-1</td>
<td>DSNTIPP</td>
<td>PROTOPR1</td>
<td>DSN6SPRM</td>
<td>SYSOPR1</td>
</tr>
<tr>
<td>Install SYSOPR-2</td>
<td>DSNTIPP</td>
<td>PROTOPR2</td>
<td>DSN6SPRM</td>
<td>SYSOPR2</td>
</tr>
</tbody>
</table>
TBSBP8K—Default 8 KB buffer pool

Use the panel or the TBSBP8K command to specify the name of the buffer pool to be used by

- table spaces with 8 KB pages in implicitly-created databases
- table spaces with 8 KB pages that are created explicitly without the BUFFERPOOL clause

**Figure 165  Modify panel**

```
DDOTM8K N                      Modify Default 8K Buffer Pool
Command ===> ________________________                             Command: CURRENT
Description . . . . . . . : DEFAULT 8K BUFFERPOOL

Type the new Default 8K Table Space Buffer Pool that you wish to change to.
Then press Enter.

Default 8K Buffer Pool
  Buffer Pool Name . . . . . (BP8K0-BP8K9)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) ---- SET TBSBP8K ---- (value) ---- (NORESET)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value | The buffer pool to use for
| | - table spaces with 8 KB pages in implicitly created databases
| | - table spaces with 8 KB pages that are created explicitly without the BUFFERPOOL clause.
| | Specify a value in the range BP8K0-BP8K9. The DB2 default is BP8K0. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Pool Name</td>
<td>DSNTIP1</td>
<td>TBSBP8K</td>
<td>DSN6SYSP</td>
<td>TBSBP8K</td>
</tr>
</tbody>
</table>
TBSBP16K—Default 16 KB buffer pool

Use the panel or the TBSBP16K command to specify the name of the buffer pool to be used by

- table spaces with 16 KB pages in implicitly-created databases
- table spaces with 16 KB pages that are created explicitly without the BUFFERPOOL clause

Figure 166  Modify panel

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET TBSBP16K ( - value - ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value   | The buffer pool to use for
  - table spaces with 16 KB pages in implicitly created databases
  - table spaces with 16 KB pages that are created explicitly without the BUFFERPOOL clause.
  Specify a value in the range BP16K0-BP16K9. The DB2 default is BP16K0. |
| NORESET | The changes you request remain in effect until the DB2 subsystem is cycled. |

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Pool Name</td>
<td>DSNTIP1</td>
<td>TBSBP16K</td>
<td>DSN6SYSP</td>
<td>TBSBP16K</td>
</tr>
</tbody>
</table>
TBSBP32K—Default 32 KB buffer pool

Use the panel or the TBSBP32K command to specify the name of the buffer pool to be used by

- table spaces with 32 KB pages in implicitly created databases
- table spaces with 32 KB pages that are created explicitly without the BUFFERPOOL clause

**Figure 167  Modify panel**

```plaintext
DDTAM32 N Modify Default 32K Buffer Pool
Command ===> _________________________________________________________________
Description . . . . . . . . : DEFAULT 32K BUFFERPOOL

Type the new Default 32K Table Space Buffer Pool that you wish to change to. Then Press Enter.

Default 32K Buffer Pool
  Buffer Pool Name . . . . . . ______ (BP32K0-BP32K9)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET TBSBP32K  (-- value --) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value      | The buffer pool to use for
  - table spaces with 32 KB pages in implicitly created databases
  - table spaces with 32 KB pages that are created explicitly without the BUFFERPOOL clause.
  Specify a value of BP32K or a value in the range BP32K1-BP32K9). The DB2 default is BP32K. |
| NORESET    | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Pool Name</td>
<td>DSNTIP1</td>
<td>TBSBP32K</td>
<td>DSN6SYSP</td>
<td>TBSBP32K</td>
</tr>
</tbody>
</table>
**TBSBPLOB—Default LOB buffer pool**

Use the Modify Default LOB Buffer Pool panel (Figure 168) or the TBSBPLOB command to specify the name of the buffer pool to be used by implicitly created LOB table spaces.

--- **NOTE**

This installation parameter applies only to DB2 version 9.1 and subsequent releases.

**Figure 168  Modify Default LOB Buffer Pool panel**

```
DDTMYZ T Modify Default LOB Buffer Pool
Command ===> _________________________________________________________________
Description ................: DEFAULT LOB BUFFERPOOL
Type the new Default LOB Buffer Pool that you wish to change to. Then press Enter.
Default LOB Buffer Pool
    Buffer Pool Name ........ ______ (BP0-BP32K9)

Command syntax and parameters
```

```
IN(DB2ssid@opertuneID) SET TBSBPLOB (bpID) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
TBSBPOOL—Default table space buffer pool

Use the Modify Default Table Space Buffer Pool panel (Figure 169) or the TBSBPOOL command to specify the default buffer pool to use for

- 4 KB page size table spaces in implicitly created databases
- 4 KB page size table spaces that are created explicitly without the BUFFERPOOL clause

**Figure 169  Modify Default Table Space Buffer Pool panel**

```
DDTG DBI1            Modify Default Table Space Buffer Pool
Command ===> ________________________________________________________________
Description . . . . . . . . : DEFAULT TABLE SPACE BUFFER POOL
Type the new Default Table Space Buffer Pool that you wish to change to. Then
press Enter.
Default Table Space Buffer Pool
   Buffer Pool Name . . . . . . ____ (BP0 - BP49)
```
Command syntax and parameters

\[
\text{IN(DB2ssid@opertuneID) SET TBSBPOOL ( value ) NORESET}
\]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The buffer pool to use for table spaces. Specify a value in the range BP0–BP49. The DB2 default is BP0.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Pool Name</td>
<td>DSNTIP1</td>
<td>TBSBPOOL</td>
<td>DSN6SYSP</td>
<td>TBSBPOOL</td>
</tr>
</tbody>
</table>
TBSBPXML—Default XML buffer pool

Use the Modify Default XML Buffer Pool panel (Figure 170) or the TBSBPXML command to specify the name of the buffer pool to be used by implicitly created XML table spaces.

**NOTE**
This installation parameter applies only to DB2 version 9.1 and subsequent releases.

**Figure 170  Modify Default XML Buffer Pool panel**

| Command: CURRENT |
|------------------|------------------|
| Description      | DEFAULT XML BUFFERPOO|
| Type the new Default XML Buffer Pool that you wish to change to. Then press Enter. |
| Default XML Buffer Pool |
| Buffer Pool Name | ______ (BP16K0-BP16K9) |

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET TBSBPXML (bpID) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>bpID</td>
<td>The name of the buffer pool that will be used for implicitly created XML table spaces. Specify a value in the range BP16K0–BP16K9. The DB2 default is BP16K0.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Pool Name</td>
<td>DSNTIP1</td>
<td>TBSBPXML</td>
<td>DSN6SYSP</td>
<td>TBSBPXML</td>
</tr>
</tbody>
</table>

TCPALVER—Accept TCP requests

Use the Modify Accept TCP Requests panel (Figure 171) or the TCPALVER command to specify whether the target DB2 will accept TCP requests without verification (requests are accepted with only a user ID and without a password, RACF PassTicket, or Kerberos ticket).

If you use a third-party product that accesses your DB2 subsystem through TCP/IP, the package may prompt each user for user ID and password information and pass that information through TCP/IP. To ensure that there are no exceptions, you need to change the TCPALVER parameter (which requires the password be sent with the user ID) to Y.

**Figure 171  Modify Accept TCP Requests panel**

```
DDTG DBII1                  Modify Accept TCP Requests
Command ===> _________________________________________________________________________
Command: CURRENT

Description . . . . . . . : ACCEPT NEW TCP REQUESTS

Type the new Accept TCP Requests value you wish to change to. Then press Enter.

Accept TCP Requests With No Password Parameter
Enabled . . . . . . . . . . _ ( Y or N )
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET TCPALVER ( Y N ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
Use the Modify TCP/IP Stack Keepalive Value panel (Figure 172) or the TCPKPALV command to specify whether to change the TCP/IP Keep Alive value, or to disable the TCP/IP probing on this subsystem.

**Figure 172  Modify TCP/IP Stack Keepalive Value panel**

```
DOTJ DHB4  Modify TCP/IP Stack Keepalive Value
Command ===> _________________________________________________________________
Description . . . . . . . : TCP/IP STACK KEEPALIVE VALUE
Type the new TCP/IP Keepalive Value that you wish to change to. Then press Enter.

TCP/IP Keepalive Value
TCP/IP Keepalive value . . 5 (Enable, Disable, 1 - 65534)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET TCPKPALV (DISABLE ENABLE) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>DISABLE</td>
<td>Keep Alive probing for this subsystem is disabled.</td>
</tr>
<tr>
<td>ENABLE</td>
<td>TCP/IP Keep Alive configuration value is not overridden.</td>
</tr>
</tbody>
</table>
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP/IP Keepalive</td>
<td>DSNTIP5</td>
<td>none</td>
<td>DSN6FAC</td>
<td>TCPKPALV</td>
</tr>
</tbody>
</table>

#### TIMEOUT—Lock timeout interval

Use the Modify Timeout Value panel (Figure 173) or the TIMEOUT command to specify the resource timeout interval (the length of time (in seconds) that a thread waits for an unavailable resource before it is terminated).

This value should, in general, be larger than the average time between two consecutive commits to allow a user to wait long enough for a resource until it is freed at commit time. The new value takes effect immediately.

**Figure 173  Modify Timeout Value panel**

```
DDTG DB11                         Modify Timeout Value
Command ===> ________________________                     Command: CURRENT

Description . . . . . . . . : LOCK TIMEOUT INTERVAL

Type the new IRLM interval timeout value that you wish to change to. Then press Enter. The timeout value must be an exact multiple of the deadlock cycle time.

IRLM Interval Parameter
Timeout value . . . . . . _____ (1-3600 or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET TIMEOUT  (-- value --)  NORESET
```
DB2 parameter values

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value          | The resource timeout value (the number of seconds a thread waits for an unavailable resource before it is timed out). Specify one of the following values:
|                | a numerical value in the range 1–3600
|                | a delta value
|                | Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–3600. |
| Note:          | The resource timeout value must be a multiple of the deadlock time. |
| NORESET        | The changes you request remain in effect until the DB2 subsystem is cycled. |

TSQTY—Table space allocation

Use the Modify Table Space Allocation Limit panel (Figure 174) or the TSQTY command to specify the amount of space that will be used for space allocation for DB2-defined data sets for table spaces that are created without the USING clause.

Figure 174 Modify Table Space Allocation Limit panel

```
DDTJ DHB4 Modify Table Space Allocation Limit
Command ===> Command: CURRENT
Description ............ : TABLE SPACE ALLOCATION
Type the new Table Space Allocation Limit for tables created without a using clause. Then Press Enter. The value is the number of kilobytes desired.
Indes Space Allocation Limit
Allocation Limit ......... 5K (0-4194304 Kilobytes or delta)
```
### Command syntax and parameters

```
IN(DB2ssid@opertuneID) SET TSQTY ( - value - ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value      | Amount of allocated space in KB for DB2-defined data sets for table spaces that are created without the USING clause. Specify one of the following values:  
  - 0 indicates that DB2 will use a default value of one cylinder for a non-LOB table space or ten cylinders for a LOB table space.  
  - a numerical value in the range 1–4194304  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–3600.  
  
A value of 0 indicates that DB2 will use a default value of one cylinder for a non-LOB table space or ten cylinders for a LOB table space. |
| NORESET    | The changes you request remain in effect until the DB2 subsystem is cycled. |

### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table space default size</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>TSQTY</td>
</tr>
</tbody>
</table>
UIFCIDS—Unicode on IFC records

Use the Modify Unicode on IFC Records panel (Figure 175) or the UIFCIDS command to specify whether the output from IFC records should include Unicode information.

**Figure 175  Modify Unicode on IFC Records panel**

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>Unicode information is included in the output from IFC records. Only a subset of the character fields (identified in the IFCID record definition by a %U in the comment area to the right of the field declaration in the DSNDQWxx copy files) are encoded in Unicode. The remaining fields maintain the same encoding of previous releases.</td>
</tr>
<tr>
<td>N</td>
<td>Unicode information is not included in the output from the IFC records.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unicode IFCIDS</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>UIFCIDS</td>
</tr>
</tbody>
</table>
UNCOLNM7—UNION column name

Use the Modify UNION column name panel (Figure 176) or the UNCOLNM7 command to specify whether result column names in UNION queries follow DB2 version 8 behavior or DB2 version 7 and earlier behavior.

Figure 176  Modify Column Name panel

```
DDTJ DHB4                      Modify UNION Column Name
Command ===>  

Description . . . . . . . . : UNION COLUMN NAME

Type the new UNION column name value you wish to change to. Then press Enter.

UNION column name Parameter
  UNION column name . N (Y or N)
```

Command syntax and parameters

```
IN(DB2ssid@opertuneID)  SET UNCOLNM7  ( Y N ) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>Y</td>
<td>UNION query column names follow DB2 version 7 and earlier behavior. The column name from the first sub-query of the union operation is used.</td>
</tr>
<tr>
<td>N</td>
<td>UNION query column names follow DB2 version 8 behavior. If the column name is the same across all sub-queries in the UNION, the result column name will be that column name. Otherwise, the result column is unnamed.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION column name</td>
<td>DSNTPPB</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>UNION_COLNAME_7</td>
</tr>
</tbody>
</table>
URCHKTH—UR checkpoint cycle warn threshold

Use the Modify UR Checkpoint Cycles Warn Threshold panel (Figure 177) or the URCHKTH command to specify the number of complete checkpoint cycles that will occur before DB2 issues a warning message to the console regarding an uncommitted unit of recovery (UR).

Figure 177  Modify UR Checkpoint Cycles Warn Threshold panel

Command syntax and parameters

Command: CURRENT
Description . . . . . . . . : UR CHECKPOINT CYCLE THRESHOLD

Type the new UR Checkpoint Cycles Warn Threshold that you wish to change to. Then press Enter.

Command ===> _________________________________________________________________

Value | Description
---|---
DB2ssid | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.
opertuneID | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).
value | The unit of recovery (UR) checkpoint threshold (the number of complete checkpoint cycles that will occur before DB2 issues a warning message to the console regarding an uncommitted unit of recovery). Specify one of the following values:
| 0—disables the element (the DB2 default)
| a numerical value in the range 1–255
| a delta value
| Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–255.
NORESET | The changes you request remain in effect until the DB2 subsystem is cycled.

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checkpoint Cycles</td>
<td>DSNTIPL</td>
<td>URCHKTH</td>
<td>DSN6SYSP</td>
<td>URCHKTH</td>
</tr>
</tbody>
</table>
**URLGWTH—UR log records before warning**

Use the Modify UR Log Records Before Warning panel (Figure 178) or the URLGWTH command to specify the number of log records written by an uncommitted unit of recovery (UR) before DB2 issues a warning message to the console. The new value takes effect immediately.

**Figure 178  Modify UR Log Records Before Warning panel**

![Modify UR Log Records Before Warning panel](image)

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID) SET URGWTH (value) NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The UR log write check (the number of log records written by an uncommitted unit of recovery before DB2 issues a warning message to the console). Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- 0—no write check is performed</td>
</tr>
<tr>
<td></td>
<td>- a numerical value in the range 1–1000000</td>
</tr>
<tr>
<td></td>
<td>- a delta value</td>
</tr>
<tr>
<td></td>
<td>Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 0–1000000.</td>
</tr>
</tbody>
</table>

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Records</td>
<td>DSNTIPL</td>
<td>URGWTH</td>
<td>DSN6SYSYSP</td>
<td>URGWTH</td>
</tr>
</tbody>
</table>
UTDUCLNM—Dump class name

Use the Modify Utility Dump Class Name panel (Figure 174) or the UTDUCLNM command to specify the name of the DFSMShsm dump class that will be used by the RESTORE SYSTEM utility to restore from a system-level backup that has been dumped to tape. This dump class will also be used by the RECOVER utility to restore objects from a system-level backup that has been dumped to tape.

**NOTE**

This setting applies only when you specify RESTORE_RECOVER_FROMDUMP=YES.

You can override this name by issuing the RESTORE SYSTEM utility statement or the RECOVER utility statement with the DUMPCLASS keyword.

**Figure 179  Modify Utility Dump Class Name panel**

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)   SET UTDUCLNM   (   value   )   NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM Macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dump Class Name</td>
<td>DSNTIP6</td>
<td>UTDUMPCL</td>
<td>DSN6SPRM</td>
<td>UTILS_DUMP_CLASS_NAME</td>
</tr>
</tbody>
</table>
**UTIMOUT—Utility timeout multiplier**

Use the Modify Utility Timeout Multiplier panel (Figure 180) or the UTIMOUT command to specify a factor that DB2 uses to calculate how long a utility waits for an unavailable resource. The actual length of time a utility waits for a resource is calculated as the UTILITY TIMEOUT multiplied by the RESOURCE TIMEOUT (the amount of time a thread waits for an unavailable resource before it is timed out).

**Figure 180  Modify Utility Timeout Multiplier panel**

```
DDTG DBI1          Modify Utility Timeout Multiplier
Command  ===>  ____________________________  Command: CURRENT
Description . . . . . . : UTILITY TIMEOUT MULTIPLIER
Type the new utility timeout value you wish to change to. Then press Enter.
Utility Timeout Parameter
  Timeout multiplier . . . . . (1-254 or delta)
```

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  SET UTIMOUT  (- value _)  NORESET
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value      | The utility timeout value (the factor used to calculate how long a utility waits for an unavailable resource). Specify one of the following values:  
  - a numerical value in the range 1–254  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–254. |
| NORESET    | The changes you request remain in effect until the DB2 subsystem is cycled. |

**DB2 parameter values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeout multiplier</td>
<td>DSNTIPI</td>
<td>UTIMOUT</td>
<td>DSN6SPRM</td>
<td>UTIMOUT</td>
</tr>
</tbody>
</table>
VOLTDEVT—Utility temp unit/device

Use the Modify Unit/Device Name for Utilities panel (Figure 181) or the VOLTDEVT command to specify the name of the device or unit for allocating temporary data sets.

Figure 181  Modify Unit/Device Name for Utilities panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>Device type or unit name for allocating temporary data sets. Specify the direct access or disk unit name that is used for the precompiler, compiler, assembler, sort, linkage editor, and utility work. DB2 utilities that dynamically allocate temporary data sets also use this parameter.</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary unit name</td>
<td>DSNTIPA</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>VOLTDEVT</td>
</tr>
</tbody>
</table>
WLMENV—Default WLM environment

Use the Modify Default WLM Environment panel (Figure 182) or the WLMENV command to specify the default WLM environment for user-defined functions or stored procedures when this value is not specified on the CREATE FUNCTION or CREATE PROCEDURE statements.

Figure 182  Modify Default WLM Environment panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>IN(DB2ssid@opertuneID) SET WLMENV</th>
<th>value</th>
<th>NORESET</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
<tr>
<td>value</td>
<td>The default WLM environment for user-defined functions or stored procedures when this value is not specified on the CREATE FUNCTION or CREATE PROCEDURE statements.</td>
</tr>
<tr>
<td>-NONE-</td>
<td>Specify this value to remove the WLM environment</td>
</tr>
<tr>
<td>NORESET</td>
<td>The changes you request remain in effect until the DB2 subsystem is cycled.</td>
</tr>
</tbody>
</table>

DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLM Environment Name</td>
<td>DSNTIPX</td>
<td>WLMENV</td>
<td>DSN6SYSP</td>
<td>WLMENV</td>
</tr>
</tbody>
</table>
XLKUPDLT—Use X locks for searched updates

Use the Modify Use X Locks For Searched Updates panel (Figure 183) or the XLKUPDLT command to specify whether DB2 acquires an exclusive (X) lock on behalf of a thread performing a searched UPDATE or DELETE.

If your data sharing environment has a workload that includes many updates that use an index, locking activity may be high. You can use XLKUPDLT to cause DB2 to use an X lock while reading rows for update. Using an X lock avoids a lock upgrade request for each row that is updated.

Figure 183 Modify Use X Locks For Searched Updates panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
XMLVALA—XML user storage limit

Use the Modify User XML Storage Limit panel (Figure 184) or the XMLVALA command to specify the maximum number of kilobytes of storage that each user is allowed for storing XML values.

**NOTE**
This installation parameter applies only to DB2 version 9.1 and subsequent releases.
Value | Description
--- | ---
**DB2ssid** | DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.
**opertuneID** | OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).
**value** | The XML user storage limit (the maximum number of kilobytes of storage that each user is allowed to use for storing XML values). Specify one of the following values:
- a numerical value in the range 1–2097152
- a delta value
  Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–2097152.

The DB2 default is 204800 KB.
XMLVALS—XML system storage limit

Use the Modify System XML Storage Limit panel (Figure 185) or the XMLVALS command to specify the maximum number of megabytes of storage that the system can use for storing XML values.

NOTE
This installation parameter applies only to DB2 version 9.1 and subsequent releases.

Figure 185  Modify System XML Storage Limit panel

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job).</td>
</tr>
</tbody>
</table>
| value       | The XML system storage limit (the maximum number of megabytes of storage that the system is allowed to use for storing XML values). Specify one of the following values:  
  - a numerical value in the range 1–51200  
  - a delta value  
    Delta values are expressed numerically (+nn or -nn) or as a percentage (+nn% or -nn%). The resulting value must fall in the range 1–51200.  
  The DB2 default is 10240 MB. |
### DB2 parameter values

<table>
<thead>
<tr>
<th>Field</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Limit</td>
<td>DSNTIPD</td>
<td>XMLVALS</td>
<td>DSN6SYSP</td>
<td>XMLVALS</td>
</tr>
</tbody>
</table>
Operational Assists

This chapter presents the following topics:

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Active log manipulation ........................................... 281
  Obtaining log data set information ............................ 283
  Adding active logs .............................................. 285
  Removing active logs .......................................... 290
  Creating active logs ........................................... 291
  Additional panel commands ................................... 294
Canceling threads/connections ................................... 295
  Considerations when canceling threads or connections .... 296
  Canceling threads or connections ............................. 297
  Canceling threads or connections using the CANCEL command 299
Update archive log BSDS entries ................................ 300
  Updating archive log entries .................................. 301
  Updating archive log entries using the UPDATE command 302
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Free form commands ............................................. 305
Free DB2 table spaces ........................................... 306
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  Freeing table spaces using the FREE and STOP commands 309
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  Reloading user exits .......................................... 311
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  Changing DDF parameters .................................... 313
  Changing DDF parameters using the DDF command ........ 315
Group buffer pool operations .................................. 317
  Changing the castout owner of a data set .................. 318
  Casting out a group buffer pool ................................ 320
  Casting out a table space ..................................... 321
  Casting out a data set ......................................... 322
Open data component operations .............................. 323
  Displaying data information .................................. 324
  Filtering table spaces ........................................ 327
  Changing the secondary extent size .......................... 328
Overview

Operational assists provide an easy means of managing aspects of DB2 subsystems that are not covered by ZPARMs.

Select the Operational Assist option from the Main Selection Menu to display the Operational Assist Menu (Figure 186). This menu divides the assist features into several areas. Each area is described in the sections that follow.

Figure 186  Operational Assist Menu

OPRX DBDC+  Operational Assist Menu
Command ===>
Choose one of the following OPERTUNE Operational Assist functions by number. Then press Enter.

1. Active log manipulation
2. Cancel threads/connections
3. Update archive log BSDS entries
4. Initiate a subsystem checkpoint
5. Free form commands
6. Free up table spaces
7. Reload user exits
8. Change DDF parameters
9. Group buffer pool operations
10. Open data component operations
11. Reload DSNHDECP option default module
12. Peer Log Operations
13. Tablespaces in exception status
14. Utility Job Status
Before using any of the OPERTUNE operational assists, you must ensure that:

- You have specified a valid local or remote OPERTUNE (see “Selecting a target OPERTUNE and subsystem” on page 44).
- You have specified a valid DB2 subsystem or data sharing group (see “Selecting a target OPERTUNE and subsystem” on page 44).
- You have the proper authority to execute the command (see Chapter 8, “OPERTUNE security”).

## Active log manipulation

You can use OPERTUNE to add, remove, or create active logs dynamically in an active DB2 subsystem. Maintain logs by performing the following actions:

- remove the data sets
- repair the data sets offline
- add the data sets back

Select the Active log manipulation option from the Operational Assist Menu to display the Add/Remove Active Logs panel (Figure 187).

### Figure 187  Add/Remove Active Logs panel

<table>
<thead>
<tr>
<th>Command</th>
<th>Add/Remove Active Logs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command</td>
<td>ADD</td>
</tr>
</tbody>
</table>

Active Log Commands Input Fields

- Copy 1 Data Set Name . . . .
- Copy 2 Data Set Name . . . .

Select the name to be placed in the corresponding copy data set name field or type it in manually. Then type in the desired command and press Enter.

- S=Select
- DD=Display Data Component Info
- DV=List Volume Info

<table>
<thead>
<tr>
<th>Sel Log Data Set Name</th>
<th>Copy Status</th>
<th>Rem</th>
</tr>
</thead>
<tbody>
<tr>
<td>.. DSNDFG.DFG1.LOGCOPY1.DS01</td>
<td>1 REUS</td>
<td>Y</td>
</tr>
<tr>
<td>.. DSNDFG.DFG1.LOGCOPY1.DS02</td>
<td>1 REUS.CUR</td>
<td>N</td>
</tr>
<tr>
<td>.. DSNDFG.DFG1.LOGCOPY1.DS03</td>
<td>1 REUS</td>
<td>Y</td>
</tr>
<tr>
<td>.. DSNDFG.DFG1.LOGCOPY2.DS01</td>
<td>2 REUS</td>
<td>Y</td>
</tr>
<tr>
<td>.. DSNDFG.DFG1.LOGCOPY2.DS02</td>
<td>2 REUS.CUR</td>
<td>N</td>
</tr>
<tr>
<td>.. DSNDFG.DFG1.LOGCOPY2.DS03</td>
<td>2 REUS</td>
<td>Y</td>
</tr>
</tbody>
</table>

***************************************************************************** Bottom of data *****************************************************************************
This panel displays a list of currently defined copy 1 log data sets and copy 2 log data sets, and the following information about each data set:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Data Set Name</td>
<td>the name of the log data set</td>
</tr>
<tr>
<td>Copy</td>
<td>the type of log (copy 1 or copy 2)</td>
</tr>
<tr>
<td>Status</td>
<td>the status of the log:</td>
</tr>
<tr>
<td></td>
<td>► CUR—current</td>
</tr>
<tr>
<td></td>
<td>► REUS—reusable</td>
</tr>
<tr>
<td></td>
<td>► NREUS—not reusable</td>
</tr>
<tr>
<td></td>
<td>► NEW—new</td>
</tr>
<tr>
<td></td>
<td>► TRUN—truncated</td>
</tr>
<tr>
<td></td>
<td>► STOP—stopped</td>
</tr>
<tr>
<td>Rem</td>
<td>whether the log is removable without using the FORCE option</td>
</tr>
</tbody>
</table>

You can specify the log data sets that you want to affect by using the following input fields:

- **Copy 1 Data Set Name**
  This input field is used as the copy 1 log data set parameter for the ADD, REMOVE, and CREATE commands. Type a name for the copy 1 data set, or type S in the Act field to select a copy 1 log data set from the list of log data sets. The data set name is copied to this field.

- **Copy 2 Data Set Name**
  This input field is used as the copy 2 log data set parameter for the ADD, REMOVE, and CREATE commands. Type S in the Act field to select a copy 2 log data set from the list of log data sets. The data set name is copied to this field.
Obtaining log data set information

From the Add/Remove Active Logs panel, you can obtain the following information about the listed log data sets:

- data component information
- volume information
- extent information

Data component information

To display data component information about a specific log data set, type DD in the Act field next to the log data set in the Add/Remove Active Logs panel. The Data Component Information panel is displayed as shown in Figure 188.

**Figure 188  Data Component Information panel**

```
DDTG DBI1                  Data Component Information
Command ===> __________________________________________________________________
Currently Selected Data Set : DBBMCAT.LOGCOPY1.DS01.DATA
Allocation Unit . . . . . . : CYLINDERS
Primary Extent Size . . . . : 24
Secondary Extent Size . . . : 0
High Allocated RBA . . . . . : 17694720
High Used RBA . . . . . . . : 17694720
Control Interval Size . . . : 4096
Max Logical Record Size . . : 0
```
Volume information

To view volume information about a log data set, type DV in the Act field next to the log data set in the Add/Remove Active Logs panel. The Data Set Volume Information panel is displayed as shown in Figure 189.

Figure 189 Data Set Volume Information panel

```
DDTG DBI1                 Data Set Volume Information               Row 1 of 1
Command ===> ________________________________________________ Scroll ===> PAGE

Currently Selected Data Set : DBBMCAT.LOGCOPY1.DS01.DATA
Select the desired volume and press Enter.
DE =Display Extent Information

Act       Volume ID       Extents        HURBA             HARBA
..       SYSDBJ                1     17694720          17694720
**********************************************************************
```

Extent information

To view data extent information about a specific volume in a log data set, type DE in the Act field next to the volume in the Data Set Volume Information panel. The Data Extent Information panel is displayed as shown in Figure 190.

Figure 190 Data Extent Information panel

```
DDTG DBI1                   Data Extent Information                 Row 1 of 1
Command ===> ________________________________________________ Scroll ===> PAGE

Currently Selected Data Set : DBBMCAT.LOGCOPY1.DS01.DATA
Currently Selected Volume  . : SYSDBJ

Extent     Low CCHH    High CCHH       Tracks      Low RBA       High RBA
1     005A0000     0071000E          360            0       17694719
**********************************************************************
```
**Adding active logs**

You can use OPERTUNE to add one of the following types of log data sets:

- single copy 1 log data set
- single copy 2 log data set
- copy 1–copy 2 pair

OPERTUNE provides a utility to copy archive log data into a predefined VSAM data set that can be used as the active log to be added. The JCL to execute the utility is found in the DDTKLOGU member of the OPERTUNE CNTL data set. For more information about the Copy Log utility, see “Adding an archive log to the active list” on page 450.

**Considerations when adding active logs**

Consider the following before adding active logs:

- You must add a log to a member subsystem in the DB2 data sharing group, not a DB2 data sharing group.

- You must create the log data sets with the proper attributes before you add the data set, or dynamic allocation errors will result. You can use the MODIFY parameter to already-created log data sets (see Step 5 in “Add active logs:” on page 287), or you can create them separately (see “Creating active logs” on page 291).

- If you are adding active logs after receiving a DSNJ111E OUT OF SPACE IN ACTIVE LOG DATA SETS message from the DB2 subsystem, you must reply to any outstanding DSNJ008E messages for the DB2 subsystem to use the new active logs.

- If the subsystem is running in dual logging mode, the copy 2 log data set (if specified) is allocated and ready for logging; otherwise, the copy 2 log data set is added to the bootstrap data set (BSDS) with no allocation attempt. Data sets added by OPERTUNE are marked *new and reusable* unless the LIKE parameter is used.

- The copy 1 BSDS data set is updated to reflect the addition of the new logs. The copy 2 BSDS data set is updated only if the subsystem is running in dual BSDS mode.

- If you use OPERTUNE to add logs into positions other than first or last, ensure that the subsystem is not cycled before the newly added logs have been used. During initialization, DB2 re-chains the logs in RBA sequence, placing new, unused logs into the chain immediately following the currently used log. This re-chaining does not cause an operational problem but causes the logs to be logically chained and, therefore, written in an order other than the physical order of the logs in the BSDS.
Add active logs:

Perform the following steps to add an active log:

1. On the Add/Remove Active Logs panel specify which active log or logs you want to add by using one of the following methods:
   - Type the name of the log in the active log commands input fields. You can type more than one log name in the input field.
   - Select an existing active log from the list of log data sets by typing S in the Act field next to the log data set.

2. Type ADD on the Command line and press Enter to display the Add Active Logs Parameters panel (Figure 191).

3. (optional) Specify the physical position of the new log entries in the BSDS by typing one of the following positions in the New log position in BSDS field:
   - FIRST—before all logs in the BSDS
   - NEXT—immediately after the current log in the BSDS
   - LAST—at the end of all logs in the BSDS (default)
   - a number that explicitly places the log in the BSDS at that location (for example, type 3 to make the log the third log in the BSDS). The number must be a number between 1 and the number of logs plus 1
4 (optional) Specify an archive log whose RBA and timestamp information you want to use as a model to initialize the active log or logs that you are adding.

A If you know the archive log name, type the name in the Archive log field.

B If you do not know the archive log name, type a question mark (?) to display the Archive Log Selection panel (Figure 192).

Figure 192 Archive Log Selection panel

C Select an archive log by typing S in the Sel field next to the desired archive log and press Enter.

5 (optional) You can create the log data set at the same time you add it, but you must specify an archive log to use as a model for the created log data set.

A If you know the name of the archive log you want to use, type the name of the log in the Model allocation similar to field in the Add Active Logs Parameters panel.

B If you do not know the name of the archive log you want to use, type a question mark (?) in the Model allocation similar to field in the Add Active Logs Parameters panel and press Enter to display the Model Log Selection panel (Figure 193 on page 288).
C  Select an archive log by typing S in the Act field next to the desired archive log and press Enter.

6  Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

The log will be added using the parameters you have specified.
Adding an active log using the ADDLOG command

To add an active log, type the ADDLOG command on the Add/Remove Active Logs panel Command line. Use the following syntax to issue the ADDLOG command:

```
IN(DB2ssid@opertuneID) ADDLOG
```

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td><strong>copy1DataSet</strong></td>
<td>The name of the copy 1 log data set.</td>
</tr>
<tr>
<td><strong>copy2DataSet</strong></td>
<td>The name of the copy 2 log data set.</td>
</tr>
<tr>
<td><strong>POSITION</strong></td>
<td>The position of log entries in the bootstrap data set (BSDS). Specify one of the following values:</td>
</tr>
<tr>
<td><strong>POS</strong></td>
<td>FIRST—the new logs are positioned in front of existing logs</td>
</tr>
<tr>
<td></td>
<td>NEXT—the new logs are positioned immediately following the current log</td>
</tr>
<tr>
<td></td>
<td>LAST—the new logs are positioned at the end of existing logs (the default)</td>
</tr>
<tr>
<td></td>
<td>an explicit number in the range 1–(number of logs + 1)</td>
</tr>
<tr>
<td><strong>LIKE</strong></td>
<td>Specify an archive log data set name to be used as a model for the RBA and timestamp information to initialize the active log or logs.</td>
</tr>
<tr>
<td><strong>archiveDataSet</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MODEL</strong></td>
<td>An active log to be used as a model for the new active log or logs. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>CURRENT—the current active log is used as a model</td>
</tr>
<tr>
<td></td>
<td>ds_name—the specified data set is used as a model</td>
</tr>
<tr>
<td></td>
<td>If copy1DataSet and copy2DataSet are specified, the model is used to create both logs.</td>
</tr>
</tbody>
</table>
Removing active logs

You can use OPERTUNE to dynamically remove a set of active logs that have already been archived and are not being used for logging. You can delete a single copy 1 log data set, a single copy 2 log data set, or a copy 1–copy 2 pair. If the subsystem is running in dual logging mode, both data sets will be deallocated and deleted from the BSDS. If the subsystem is running in single log mode, the copy 2 log data set (if specified) is removed from the BSDS.

An active log data set can be removed only if it is marked reusable; however, active logs marked not reusable can be removed with the FORCE parameter if they are not in use by the subsystem. The copy 1 BSDS data set is always updated to reflect the removal of the active logs. The copy 2 BSDS data set is updated only if the subsystem is running in dual BSDS mode.

**WARNING**

If DB2 is running with ARCHIVE off, additional care must be taken before removing the set of active logs to avoid impairing the ability to recover subsystem data.

Removing an active log

Perform the following steps to remove an active log:

1. Select the archive log or logs that you want to delete from the Add/Remove Active Logs panel (Figure 187 on page 281) by typing an S in the Act field next to the data set. You can also type the name of the log on the Command line.

2. Type Remove on the Command line and press Enter.

3. Issue the REMLOG command from the Command Confirmation panel by typing 1 in the selection field and press Enter. To cancel the command, type 2 in the selection field and press Enter.

Forcibly removing an active log

Perform the following steps to forcibly remove an active log:

1. Select the archive log or logs that you want to delete from the Add/Remove Active Logs panel (Figure 187 on page 281) by typing an S in the Act field next to the data set. You can also type the name of the log on the Command line.

2. Type Remove,Force on the Command line and press Enter.
3 Issue the REMLOG command from the Command Confirmation panel by typing 1 in the selection field and press Enter. To cancel the command, type 2 in the selection field and press Enter.

**WARNING**
Removing an active log that has not been archived may impair the recoverability of data.

### Removing an active log using the REMLOG command

Use the following syntax to issue the REMLOG command:

\[ \text{IN(DB2ssid@opertuneID)} \text{ REMLOG} \]

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>copy1DataSet</td>
<td>The name of the copy 1 log data set.</td>
</tr>
<tr>
<td>copy2DataSet</td>
<td>The name of the copy 2 log data set.</td>
</tr>
<tr>
<td>FORCE</td>
<td>Active logs marked not reusable are removed.</td>
</tr>
</tbody>
</table>

### Creating active logs

OPERTUNE creates new logs by invoking IDCAMS from your OPERTUNE session. You can create a log in three ways:

- specify all of the parameters (see “Creating an active log by specifying all parameters” on page 293)
- copy the parameters from another log and make any necessary changes (see “Creating an active log by copying parameters” on page 293)
- create a log at the same time you add it (see step 5 on page 287)
You can also use the CREATELOG command to create a log. See “Creating an active log using the CREATLOG command” on page 294 for more information.

**NOTE**

You cannot create a log for a DB2 data sharing group.

Use the Create Data Set Parameters panel (Figure 194) to set or modify the CREATE command parameters.

**Figure 194  Create Data Set Parameters panel**

```
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data set name</td>
<td>The name of the active log to be created.</td>
</tr>
<tr>
<td>Read password</td>
<td>The password for the new log data set (optional).</td>
</tr>
<tr>
<td>Volume</td>
<td>The volume serial number of the storage device.</td>
</tr>
<tr>
<td>Unit</td>
<td>The unit of allocation to be used on the storage device; Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>CYLINDERS</td>
</tr>
<tr>
<td></td>
<td>TRACKS</td>
</tr>
<tr>
<td></td>
<td>RECORDS</td>
</tr>
<tr>
<td></td>
<td>MEGABYTES</td>
</tr>
<tr>
<td></td>
<td>KILOBYTES</td>
</tr>
<tr>
<td>Primary</td>
<td>The number of units for the primary allocation.</td>
</tr>
<tr>
<td>Secondary</td>
<td>The number of units for the secondary allocation.</td>
</tr>
<tr>
<td>Catalog</td>
<td></td>
</tr>
<tr>
<td>Catalog password</td>
<td></td>
</tr>
</tbody>
</table>
```

The following input fields are displayed on the Create Data Set Parameters panel:
Creating an active log by specifying all parameters

To specify all of the parameters for a new log, perform the following steps:

1. On the Add/Remove Active Logs panel (Figure 187 on page 281), type Create on the Command line and press Enter.

The Create Data Set Parameters panel is displayed. You can specify the CREATE command parameters on this panel.

2. Type the requested information and press Enter to invoke IDCAMS.

When processing is finished, the OPERTUNE IDCAMS Response panel is displayed with the results of the IDCAMS DEFINE CLUSTER command.

Creating an active log by copying parameters

To create a new log by copying the parameters from another log, follow these steps:

1. On the Add/Remove Logs panel (Figure 187 on page 281), select a data set by either typing a name in the Copy 1 Data Set Name field or typing 1 next to a log from the displayed list, and pressing Enter.

2. Type Create on the Command line and press Enter.

The Create Data Set Parameters panel displays the data set name, volume, unit, primary allocation, and secondary allocation information from the named log.

3. Modify the information as necessary and press Enter to invoke IDCAMS.

When processing is finished, the OPERTUNE IDCAMS Response panel is displayed with the results of the IDCAMS DEFINE CLUSTER command.

### Table: Create Data Set Parameters

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog</td>
<td>The name of the catalog that will contain the log.</td>
</tr>
<tr>
<td>Catalog password</td>
<td>The password that will be used to access the catalog (optional).</td>
</tr>
</tbody>
</table>
Creating an active log using the CREATLOG command

Use the following syntax to issue the CREATLOG command:

\texttt{IN(DB2ssid@opertuneID) CREATLOG}

\textbf{Command syntax and parameters}

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>\texttt{DB2ssid}</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>\texttt{opertuneID}</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>\texttt{dataset}</td>
<td>The name of the active log to be created.</td>
</tr>
<tr>
<td>\texttt{volume}</td>
<td>The volume serial number of the storage device.</td>
</tr>
<tr>
<td>\texttt{records}</td>
<td>The number of records the log will hold.</td>
</tr>
<tr>
<td>\texttt{password}</td>
<td>The password for the log data set (optional).</td>
</tr>
<tr>
<td>\texttt{catalog}</td>
<td>The name of the catalog that will contain the log (optional).</td>
</tr>
<tr>
<td>\texttt{catpass}</td>
<td>The password that will be used to access the catalog (optional).</td>
</tr>
</tbody>
</table>

\textbf{Additional panel commands}

In addition to the ADD, REMOVE, and CREATE commands, the following commands are available on the Add/Remove Active Logs panel:

- ZPARMS displays the Element Selection panel (Figure 9 on page 51)
- SWITCH changes the active subsystem log to the next active log
- CANCEL OFFLOAD cancels any archive process currently running
## Canceling threads/connections

Threads can be canceled by using the Thread/Connection List panel or by issuing the CANCEL command. Select the **Cancel threads/connections** option from the Operational Assist Menu to display the Thread/Connection List panel (Figure 195).

### Figure 195  Thread/Connection List panel

<table>
<thead>
<tr>
<th>DDTG DB11</th>
<th>Thread/Connection List</th>
<th>Row 1 of 1</th>
<th>Scroll ===&gt; PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command ===&gt; ________________________________________________</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commands: FILTER</td>
<td>ZPARMS</td>
<td>DETAIL</td>
<td></td>
</tr>
<tr>
<td>Select the desired entry to be canceled and press Enter.</td>
<td>CANCEL ALL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C =Cancel CS =Cancel Synchronously</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Act Subsys Connection Correlation Auth Id Plan Asid Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.. DBBM DB2CALL BBSYSM MAINT N/A 0039 T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>******************************* Bottom of data ******************************</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use the Thread/Connection List panel to perform the actions that are listed in the following table.

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILTER</td>
<td>Filters the list of connections or threads by specific criteria</td>
</tr>
<tr>
<td>ZPARMS</td>
<td>Lists the OPERTUNE elements</td>
</tr>
<tr>
<td>DETAIL</td>
<td>Toggles between showing and hiding the Luwid, Requests, and Token fields in the information displayed about the threads and connections.</td>
</tr>
<tr>
<td>CANCEL ALL</td>
<td>Cancels all threads meeting the filter criteria. Control is returned to you without waiting for the cancel to complete.</td>
</tr>
<tr>
<td>C</td>
<td>Cancels the selected thread or connection. Control is returned to you without waiting for the cancel to complete.</td>
</tr>
<tr>
<td>CS</td>
<td>Cancels the selected thread or connection. Control is not returned to you until the cancel completes.</td>
</tr>
<tr>
<td>CANCEL ALL SYNCH</td>
<td>Cancels all threads meeting the filter criteria. Control is not returned to you until the cancel completes.</td>
</tr>
</tbody>
</table>

**Note:** This command is not listed on the panel.
Considerations when canceling threads or connections

Consider the following information before canceling threads or connections:

- You can use OPERTUNE to cancel threads, but sometimes a cancel is not possible; for example, when a thread is hung in DB2 because of logic errors. When you cancel a utility thread, you are responsible for restarting the thread and recovering the table space. OPERTUNE cannot cancel an IFI thread (monitor thread), because IFI has its own recovery routines and recovers from the cancel.

- OPERTUNE cannot cancel threads that have their own ESTAE recovery logic. If you try to cancel a thread and it appears that the attempt has failed, verify whether an accounting record for the thread termination was created, followed by a recovery of the thread.

- If all of the connection threads for the CICS attachment facility are canceled, you need to start the CICS attachment facility using the DSNC STRT command.

- If a connection thread for IMS is canceled, you need to start the IMS connection using the /START command.

- OPERTUNE must run at a dispatching priority higher than any DB2-allied address spaces. If it does not, cancel requests may not get the resources necessary for completion. You can cancel connections and threads in some allied address spaces. Table 3 summarize the expected results when canceling a thread or a connection.

Table 3  Cancel thread results for DB2 (part 1 of 2)

<table>
<thead>
<tr>
<th>Environment</th>
<th>Thread Status</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch</td>
<td>T (In DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>Batch</td>
<td>T* (Active in DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>Batch</td>
<td>QT (Queued Thread)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>Batch</td>
<td>TR (Distributed)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>Batch</td>
<td>RA (Remote Access)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>Batch</td>
<td>N (Connection)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>CICS</td>
<td>T (In DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>CICS</td>
<td>T* (Active in DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>CICS</td>
<td>TR (Distributed)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>CICS</td>
<td>RA (Remote Access)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>IMS</td>
<td>T (In DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>IMS</td>
<td>T* (Active in DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>IMS</td>
<td>TR (Distributed)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>IMS</td>
<td>RA (Remote Access)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>QMF</td>
<td>T (In DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
</tbody>
</table>
To cancel a thread or connection, perform the following steps:

1. On the Thread/Connection List panel, type one of the following commands:
   - C in the Act field next to the connection or thread you want to cancel
   - CS in the Act field next to the connection or thread you want to cancel
   - CANCEL ALL on the Command line
     You will need to filter the threads. See “Filtering threads” on page 298.
   - CANCEL ALL SYNCH on the Command line
     You will need to filter the threads. See “Filtering threads” on page 298.

2. Press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

### Table 3  Cancel thread results for DB2 (part 2 of 2)

<table>
<thead>
<tr>
<th>Environment</th>
<th>Thread Status</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>QMF</td>
<td>T* (Active in DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>QMF</td>
<td>QT (Queued Thread)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>QMF</td>
<td>TR (Distributed)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>QMF</td>
<td>RA (Remote Access)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>QMF</td>
<td>N (Connection)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>TSO</td>
<td>T (In DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>TSO</td>
<td>T* (Active in DB2)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>TSO</td>
<td>QT (Queued Thread)</td>
<td>Cancel takes effect immediately</td>
</tr>
<tr>
<td>TSO</td>
<td>TR (Distributed)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>TSO</td>
<td>RA (Remote Access)</td>
<td>Cancel takes effect on the next call to DB2</td>
</tr>
<tr>
<td>TSO</td>
<td>N (Connection)</td>
<td>Cancel takes effect immediately</td>
</tr>
</tbody>
</table>

---

**NOTE**
The Status column displays the status of the thread as returned from a DB2 -DISPLAY THREAD command. An asterisk in the Thread Status column indicates that with any other status, the thread is active and eligible for immediate cancel and rollback if updates occur.
Filtering threads

If the list of threads or connections on the Thread/Connections panel is too long, or you want to use the CANCEL ALL or CANCEL ALL SYNC command on a group of threads, you must filter the threads.

1 Type FILTER on the Command line and press Enter.

Use the Thread/Connection Filter Specifications Panel (Figure 196) to filter the display of threads or connections in the following ways:

- Connection name
- Correlation ID
- Authorization ID
- Plan name
- Address space ID
- Thread status

Figure 196 Thread/Connection Filter Specifications panel

2 Type the information (in uppercase or lowercase) that you want to use to filter the threads into the appropriate fields, and press Enter. You can use wildcards as follows:

- ? can be substituted for any single character
- * can be substituted for one or more characters at the end of a specification

You will be returned to the Thread/Connection List panel, and the threads or connections will be filtered according to your specifications.
Canceling threads or connections using the CANCEL command

The CANCEL command can be issued through the modify command as follows:

\[ \text{IN}(\text{DB2ssid@opertuneID}) \text{ CANCEL} \]

**Command syntax and parameters**

```
IN(DB2ssid@opertuneID)  CAN
   (CONN (connection))
   (CORR (correlationID))
   (AUTH (authID))
   (PLAN (plan))
   (ASID (address))
   (LUWID (luwID))
   (TOKEN (tokenID))
   CANCEL
   CAN
   ALL
   SYNC
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>connection</td>
<td>The connection name of the thread being canceled.</td>
</tr>
<tr>
<td>correlationID</td>
<td>The correlation ID of the thread being canceled.</td>
</tr>
<tr>
<td>authID</td>
<td>The authorization ID of the thread being canceled.</td>
</tr>
<tr>
<td>plan</td>
<td>The plan name for the thread being canceled.</td>
</tr>
<tr>
<td>address</td>
<td>The address space of the thread being canceled.</td>
</tr>
<tr>
<td>luwID</td>
<td>The logical unit of work ID. The LUWID consists of the following components:</td>
</tr>
<tr>
<td></td>
<td>■ optional, fully-qualified LU network name</td>
</tr>
<tr>
<td></td>
<td>■ required LU instance number</td>
</tr>
<tr>
<td></td>
<td>Use the DISPLAY THREAD command to obtain the LUWID (see “DISPLAY THREAD command” on page 376).</td>
</tr>
<tr>
<td>tokenID</td>
<td>The token that uniquely identifies the thread to DB2.</td>
</tr>
<tr>
<td></td>
<td>Use the DISPLAY THREAD command to obtain the token ID (see “DISPLAY THREAD command” on page 376).</td>
</tr>
<tr>
<td>ALL</td>
<td>All threads matching the specifications are canceled.</td>
</tr>
<tr>
<td>SYNC</td>
<td>Control does not return to the user until the cancel completes.</td>
</tr>
</tbody>
</table>
Update archive log BSDS entries

Use the **Update archive log BSDS entries** option on the Operational Assist Menu to access the Archive Log BSDS Entry List panel (Figure 197). This panel displays a list of all of the archive log entries. From this panel you can update archive log BSDS entries by editing the entry information in the Edit Archive Log BSDS Entry panel, or by issuing the ARCHIVE command.

**Figure 197  Archive Log BSDS Entry List panel**

The Archive Log BSDS Entry List panel displays the following information for each archive log:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ssid</td>
<td>The subsystem ID the log is associated with</td>
</tr>
<tr>
<td>Data Set Name</td>
<td>Name of the log data set</td>
</tr>
<tr>
<td>Cataloged</td>
<td>Whether the log is contained in the system catalog</td>
</tr>
<tr>
<td>Volume</td>
<td>Volume serial number that is associated with the data set name</td>
</tr>
<tr>
<td>Unit</td>
<td>Unit type that is associated with the data set name</td>
</tr>
<tr>
<td>Copy</td>
<td>Whether the data set name is the copy 1 or copy 2 log</td>
</tr>
</tbody>
</table>
Chapter 4 Operational Assists

Updating archive log entries

NOTE
This feature does not handle multi-volume archive log data sets. The last volume of a multi-log data set is the only volume displayed on this panel. An edit request will update only the first volume of a multi-log data set.

To update archive log entries from the menu, follow these steps:

1 On the Archive Log BSDS Entry List panel, type E next to entry that you want to edit and press Enter.

The Edit Archive Log BSDS Entry panel is displayed (Figure 198).

Figure 198 Edit Archive Log BSDS Entry panel

2 Type any changes for the entry into the appropriate field and press Enter:
   - Unit name
   - Volume serial number
   - Cataloged status

If you leave any fields blank, the values remain unchanged.

Once you press Enter, an UPDATE command is built to perform the request.

NOTE
The UPDATE command changes only the entry in the BSDS data set. It does not physically move or catalog the archive log entry.
Updating archive log entries using the UPDATE command

The UPDATE command can be issued through the modify command as follows:

\texttt{IN(DB2ssid@opertuneID) UPDATE}

\textbf{Command syntax and parameters}

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>dataSet</td>
<td>The name of the archive log data set to be updated.</td>
</tr>
<tr>
<td>newUnit</td>
<td>The unit type to be associated with the data set name.</td>
</tr>
<tr>
<td>newVolume</td>
<td>The volume serial number to be associated with the data set name.</td>
</tr>
<tr>
<td>CATALOG</td>
<td>Indicates whether the log is in the system catalog. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- Y—the log is entered in the system catalog.</td>
</tr>
<tr>
<td></td>
<td>- N—the log is not entered in the system catalog.</td>
</tr>
</tbody>
</table>
Initiate a subsystem checkpoint

Select the **Initiate a subsystem checkpoint option** from the Operational Assist Menu to display the Command Confirmation panel (Figure 199) with a CHECKPT command built in the **Command(s) Requested** field.

**Figure 199  Command Confirmation panel**

1. Select one of the following actions by typing the corresponding number in the selection field:
   - Option 1 to initiate an immediate subsystem checkpoint
   - Option 2 to cancel the request
   - Option 3 to create a batch job stream

2  *(optional)* To edit the request, type **Edit** on the **Command** line.

3  Press **Enter**.

**NOTE**

If you initiate a subsystem checkpoint by issuing the CHECKPT command, the current LOGLOAD counter is reset so that the proper number of updates are required before a subsequent checkpoint is initiated.
Initiating a subsystem checkpoint using the CHECKPT command

Use the following syntax to issue the CHECKPT command:

IN(DB2ssid@opertuneID) CHECKPT

- `DB2ssid` is the subsystem ID of the DB2 to which the command applies
- `opertuneID` is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job)

**NOTE**

The CHECKPT command has no parameters.
Free form commands

Select the **Free form commands** option from the Operational Assist Menu to display the Free Form Command panel (**Figure 200**), from which you can execute OPERTUNE and non-OPERTUNE commands.

**Figure 200  Free Form Command panel**

1. Select the type of command you want to execute by typing the option in the field.
   - OPERTUNE commands that affect a DB2 subsystem (for example, SET and FREE)
   - OPERTUNE commands that are not subsystem specific (that is, ALTER, MAINT and STATUS)
   - DB2 subsystem commands. If the subsystem commands are issued to a subsystem that is not active, OPERTUNE queues the commands for processing when the target subsystem is brought up
   - MVS commands, entered as if from an MVS console
   - XBM commands

2. Type the command syntax in the **Command Area** field, and press **Enter**. For example, use the following syntax to issue the ISSUE command:

   \[ \text{IN(DB2ssid@opertuneID) ISSUE} \]

   - **DB2ssid** is the subsystem ID of the DB2 to which the command applies
   - **opertuneID** is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job)
Free DB2 table spaces

Table spaces can be freed from the Inuse Table Space List panel (Figure 201) or by using the FREE command. Select the Free up table spaces option from the Operational Assist Menu to display the Inuse Table Space List panel, which lists table spaces being accessed or used on the target DB2 system.

Figure 201  Inuse Table Space List panel

Use this panel to perform the actions that are listed in the following table:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free (F)</td>
<td>cancels all users currently accessing the table space. The table space is not stopped and control might be returned to you before all of the canceled threads actually terminate.</td>
</tr>
<tr>
<td>Free sync (FS)</td>
<td>stops a table space and then cancels all users currently accessing the table space. When the table space stops (that is, when all of the threads terminate), the table space restarts and control is returned to you.</td>
</tr>
<tr>
<td>Stop (S)</td>
<td>stops the table space. No threads are canceled and control might be returned to you before the table space actually stops.</td>
</tr>
<tr>
<td>Stop sync (SS)</td>
<td>stops a table space. No users are canceled and control is returned to you after the table space actually stops.</td>
</tr>
<tr>
<td>Stop and free sync (SF)</td>
<td>stops a table space and then cancels all users currently accessing the table space. Control is returned to you after the table space actually stops.</td>
</tr>
</tbody>
</table>
Free DB2 table spaces

To free table spaces, perform the following steps:

1. On the Inuse Table Space List panel, type one of the following commands next to the table space you want to free:
   - F
   - FS
   - S
   - SS
   - SF
   - SN

2. Press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

### Canceling users

To cancel a user for a particular table space, perform the following steps:

1. On the Inuse Table Space List panel, type U next to the table space whose users you want to cancel.

2. Press Enter.

3. From the panel, select a user who you want to cancel, and press Enter.
4 Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Filtering table spaces

If the list of table spaces on the Inuse Table Space List panel is too long, you can filter the threads.

1 Type FILTER on the Command line and press Enter.

The Thread/Connection Filter Specification Panel (Figure 202) allows you to filter the display of threads or connections by the following ways:

- catalog name
- database name
- table space name

![Figure 202  Table Space Filter Specification panel](image)

2 Type the information you want to use to filter the threads into the appropriate fields, and press Enter. You can use wildcards as follows:

- ? can be substituted for any single character
- * can be substituted for one or more characters at the end of a specification

You will be returned to the Inuse Table Space List panel, but the table spaces will be filtered according to your specifications.
Freeing table spaces using the FREE and STOP commands

You can use the FREE and STOP commands to free DB2 table spaces.

**FREE command**

The syntax for the FREE command is as follows:

```
FREE (without SYNC and STOP) IN(DB2ssid@opertuneID) STOP
```

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>DB2ssid</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>FREE (without SYNC and STOP)</td>
<td>All users currently using the table space are canceled. The table space is not stopped. Control might return to the requester before all of the canceled threads actually terminate.</td>
</tr>
<tr>
<td>FREE with SYNC</td>
<td>The table space is stopped. All users currently accessing the table space are then canceled. When all of the threads terminate, the table space is started again. Control is then returned to the requester.</td>
</tr>
<tr>
<td>FREE with STOP</td>
<td>The table space is stopped. All users currently accessing the table space are then canceled. Control might return to the requester before all of the canceled threads actually terminate.</td>
</tr>
<tr>
<td>FREE with SYNC and STOP</td>
<td>The table space is stopped. All users currently accessing the table space are then canceled. Control is not returned to the requester until the table space actually stops.</td>
</tr>
<tr>
<td><code>catalog*</code></td>
<td>The VCAT name or an alias entry for the table space.</td>
</tr>
<tr>
<td><code>database*</code></td>
<td>The name of the database that resides in the table space.</td>
</tr>
<tr>
<td><code>tableSpace*</code></td>
<td>The name of the table space to be freed.</td>
</tr>
<tr>
<td><code>partition</code></td>
<td>The number of the table space partition to be freed. If this value is not specified, the entire table space is freed.</td>
</tr>
</tbody>
</table>

* The following wildcards are permitted:
  - `?` can be substituted for any single character
  - `*` can be substituted for one or more characters at the end of the specification
STOP command

The syntax for the STOP command is as follows:

```
IN(DB2ssid@opertuneID) STOP
```

### Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>STOP (without SYNC)</td>
<td>The table space is stopped. No threads are canceled. Control might return to the requester before the table space actually stops.</td>
</tr>
<tr>
<td>STOP with SYNC</td>
<td>The table space is stopped. No threads are canceled. Control is returned to the requester after the table space actually stops.</td>
</tr>
<tr>
<td>catalog*</td>
<td>The ICF catalog that contains the entry for the table space.</td>
</tr>
<tr>
<td>database*</td>
<td>The name of the database that contains the table space.</td>
</tr>
<tr>
<td>tableSpace*</td>
<td>The name of the table space to be stopped.</td>
</tr>
<tr>
<td>partition</td>
<td>The number of the table space partition to be stopped. If this value is not specified, the entire table space is freed.</td>
</tr>
</tbody>
</table>

* Wildcards are not permitted.
Reload DB2 user exits

Select the **Reload user exits** option from the Operational Assist Menu to display the Reload Subsystem Exits panel (Figure 203), which allows you to reload DB2 user exits without cycling the DB2 subsystem. You can also use the RELOAD command. The RELOAD command loads a new copy of that exit into storage and activates it for immediate use by that DB2 subsystem. The previous copy of the load module (although deactivated) is not removed from storage until the DB2 subsystem terminates.

**Figure 203  Reload Subsystem Exits panel**

<table>
<thead>
<tr>
<th>Act</th>
<th>Exit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>..</td>
<td>DSNJL004</td>
<td>LOG CAPTURE USER EXIT</td>
</tr>
<tr>
<td>..</td>
<td>DSNX@XAC</td>
<td>ACCESS CONTROL AUTHORIZATION EXIT</td>
</tr>
<tr>
<td>..</td>
<td>DSNXVDTX</td>
<td>LOCAL DATE EXIT</td>
</tr>
<tr>
<td>..</td>
<td>DSNXVTMX</td>
<td>LOCAL TIME EXIT</td>
</tr>
<tr>
<td>..</td>
<td>DSN3@ATH</td>
<td>CONNECTION USER EXIT</td>
</tr>
<tr>
<td>..</td>
<td>DSN3@SGN</td>
<td>SIGN-ON USER EXIT</td>
</tr>
</tbody>
</table>

The following exits are supported by OPERTUNE:

- DSN3@ATH—the identify authorization connection exit
- DSN3@SGN—the signon connection exit
- DSNJL004—the log capture exit
- DSNX@XAC—the access control authorization exit
- DSNXVDTX—the local date exit
- DSNXVTMX—the local time exit

**Reloading user exits**

To reload the user exits, follow these steps:

1. On the Reload Subsystem Exits panel, select an entry with the S action code to build a RELOAD command for the selected exit.

2. Press Enter.
Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

**Reloading user exits using the RELOAD command**

The syntax for the RELOAD command is as follows:

```
IN((DB2ssid@opertuneID) RELOAD
```

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>DSN3@ATH</td>
<td>The identify authorization connection exit.</td>
</tr>
<tr>
<td>DSN3@SGN</td>
<td>The signon connection exit.</td>
</tr>
<tr>
<td>DSNJL004</td>
<td>The log capture exit.</td>
</tr>
<tr>
<td>DSNX@XAC</td>
<td>The access control authorization exit.</td>
</tr>
<tr>
<td>DSNXVDTX</td>
<td>The local date exit.</td>
</tr>
<tr>
<td>DSNXVTMX</td>
<td>The local time exit.</td>
</tr>
</tbody>
</table>
Change DDF parameters

Select the **Change DDF parameters** option from the Operational Assist Menu to display the Change DDF Parameters panel (Figure 204), which allows you to dynamically change the DDF parameters. You can also use the DDF command. The current DDF values from the BSDS record are displayed when the panel is initially displayed.

**Figure 204 Change DDF Parameters panel**

Although the DDF BSDS record is updated immediately, the changes do not take effect until the next time that DDF is started.

**Changing DDF parameters**

To change the DDF parameters from the OPERTUNE menus, perform the following steps:

1. Select the **Change DDF parameters** option from the Operational Assist Menu to display the Change DDF Parameters panel.

   The current DDF values from the BSDS record are displayed on the Change DDF Parameters panel.

2. Change the information on the panel as necessary. The following table describes the fields on the Change DDF Parameters panel.
### Change DDF parameters

#### Field | Description
--- | ---
Site location name | The name that is used by other DB2 subsystems to refer to the current DB2 subsystem
Luname for site to use | The VTAM logical unit (LU) name that this DB2 subsystem uses to communicate with other DB2 subsystems
Password for luname | The password that VTAM uses to recognize that the DB2 subsystem is authorized to use the LU name. Specifying -NONE- indicates that no password is to be used.
Generic LU Name | The logical unit name that is used with VTAM generic resource support to enable one LU name to be used for a data sharing group. Specifying -NONE- indicates that no generic name is to be used.
Idle thread status | The status of database access threads after a successful commit or rollback. If no database locks or cursors are held, a database access thread can be made inactive, which eliminates the overhead of repeated connections. Specify one of the following values:
  - **ACTIVE**—keeps the database access threads active and under the Max Remote Active limit
  - **INACTIVE**—lets the database access threads become inactive and fall within the Max Remote Concurrent limit
TCP/IP PORT Number | The port that is used by DDF to accept incoming DRDA connection requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that TCP/IP support is deactivated.
TCP/IP RESPORT Number | The port that is used by DDF to accept incoming DRDA 2-phase commit resynchronization requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that TCP/IP support is deactivated.
TCP/IP SECPORT Number | The port that is used by DDF to accept incoming secure DRDA connection requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that secure DDF connection support for TCP/IP is deactivated.

**Note:** This value applies only to DB2 version 9 and later releases.

3 Press **Enter**.

4 Issue the command from the Command Confirmation panel by typing **1** in the selection field and pressing **Enter**. To cancel the command, type **2** in the selection field and press **Enter**.
Changing DDF parameters using the DDF command

The syntax for the DDF command is as follows:

\[
\text{IN(} \text{DB2ssid@opertuneID}) \ DDF
\]

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2ssid</strong></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><strong>opertuneID</strong></td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td><strong>location</strong></td>
<td>The name that is used by other DB2 subsystems to refer to the current DB2 subsystem</td>
</tr>
<tr>
<td><strong>luName</strong></td>
<td>The VTAM logical unit (LU) name that this DB2 subsystem uses to communicate with other DB2 subsystems</td>
</tr>
<tr>
<td><strong>password</strong></td>
<td>The password that VTAM uses to recognize that the DB2 subsystem is authorized to use the LU name. Specifying -NONE- indicates that no password is to be used.</td>
</tr>
<tr>
<td><strong>port</strong></td>
<td>The port that is used by DDF to accept incoming DRDA connection requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that TCP/IP support is deactivated.</td>
</tr>
<tr>
<td><strong>resyncPort</strong></td>
<td>The port that is used by DDF to accept incoming DRDA 2-phase commit resynchronization requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that TCP/IP support is deactivated.</td>
</tr>
<tr>
<td><strong>VTAMgenLUname</strong></td>
<td>The logical unit name that is used with VTAM generic resource support to enable one LU name to be used for a data sharing group. Specifying -NONE- indicates that no generic name is to be used.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>securePort</strong></td>
<td>The port that is used by DDF to accept incoming DRDA secure connection requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that TCP/IP support is deactivated.</td>
</tr>
</tbody>
</table>
The status of database access threads after a successful commit or rollback. If no database locks or cursors are held, a database access thread can be made inactive, which eliminates the overhead of repeated connections.

Specify one of the following values:

- ACTIVE—keeps the database access threads active and under the Max Remote Active limit
- INACTIVE—lets the database access threads become inactive and fall within the Max Remote Concurrent limit

**securePort**

The port that is used by DDF to accept incoming secure DRDA connection requests. Specify a numerical value in the range 0–65534. A value of 0 indicates that secure DDF connection support for TCP/IP is deactivated.

**Note:** This value applies only to DB2 version 9.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVE</td>
<td>The status of database access threads after a successful commit or rollback. If no database locks or cursors are held, a database access thread can be made inactive, which eliminates the overhead of repeated connections. Specify one of the following values: ACTIVE—keeps the database access threads active and under the Max Remote Active limit</td>
</tr>
</tbody>
</table>
Group buffer pool operations

Using the OPERTUNE group buffer pool operations, you can perform I/O balancing among the DB2 subsystems in a data sharing group by changing the castout owner of a data set. The castout operations provide a way for you to force DB2 to write data to disk so that external applications can read the data sets directly. You can:

- change the castout owner of a data set (see page 318)
- cast out a group buffer pool (see page 320)
- cast out a table space (see page 321)
- cast out a data set (see page 322)

Select the Group buffer pool operations option from the Operational Assist Menu to display the Group Buffer Pool List panel (Figure 205), which lists all active group buffer pools.

**Figure 205  Group Buffer Pool List panel**

Use this panel to perform the actions listed in the following table:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castout (C)</td>
<td>Castout the group buffer pool</td>
</tr>
<tr>
<td>GBP Dependent Table Space List (L)</td>
<td>List the GBP dependent table spaces for changing the castout owner, or casting out a table space or a data set</td>
</tr>
<tr>
<td>ZPARMS</td>
<td>display the Element Selection panel (Figure 9 on page 51).</td>
</tr>
</tbody>
</table>
Changing the castout owner of a data set

You can change the castout owner by using panels from OPERTUNE or by using the CHANGECO command. Follow these instructions to change the castout owner of a data set:

1. From the Group Buffer Pool List Panel, type L in the Act field next to the group buffer pool that contains the castout owner you want to change and press Enter.

   The GBP Dependent Table Space List panel (Figure 206) is displayed.

**Figure 206  GBP Dependent Table Space List panel**

2. Type L in the Act field next to the table space and press Enter.

   The GBP Dependent Dsname List panel (Figure 207) is displayed.

**Figure 207  GBP Dependent Dsname List panel**

3. Type CO in the Act field to select the data set that has the castout owner that you want to change, and press Enter.
The Castout Backup Owner List panel (Figure 208) is displayed.

**Figure 208  Castout Backup Owner List panel**

4 Type S in the Act field next to the backup owner you want to change to, and press Enter.

5 Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

**Changing the castout owner of a data set using the CHANECO command**

Use the following syntax to issue the CHANECO command:

```
IN(DB2ssid@opertuneID) CHANECO
```

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>
Casting out a group buffer pool

You can cast out a group buffer pool from the Group Buffer Pool List panel or by using the CASTOUT GBPOOL command.

To cast out a group buffer pool by using the OPERTUNE panels, follow these steps:

1. On the Group Buffer Pool List panel (Figure 205 on page 317), type C in the Act field for the group buffer pool you want to cast out, and press Enter.

   This builds a CASTOUT GBPOOL command for the selected group buffer pool.

2. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Casting out a group buffer pool using the CASTOUT GBPOOL command

Use the following syntax to issue the CASTOUT GBPOOL command:

```
IN(DB2ssid@opertuneID) CASTOUT GBPOOL
```

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dataSet</td>
<td>Specify the name of the data set for which the castout owner will be changed.</td>
</tr>
<tr>
<td>owner</td>
<td>Specify the subsystem that will be the new castout owner of the specified data set.</td>
</tr>
</tbody>
</table>
Casting out a table space

You can cast out a table space from a series of online panels or by using the CASTOUT TABLESPACE command.

Perform the following steps to cast out a table space:

1. On the Group Buffer Pool List Panel, type L in the Act field to select a group buffer pool that you want to cast out.

   The GBP Dependent Table Space List panel is displayed.

2. Type C in the Act field next to the table space that you want to cast out, and press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Casting out a table space using the CASTOUT TABLESPACE command

Use the following syntax to issue the CASTOUT TABLESPACE command:

\[
\text{IN(DB2ssid@opertuneID) CASTOUT TABLESPACE}
\]

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>
| gbpoolID         | Specify a group buffer pool ID in one of the following ranges: 
|                  | - GBP0-GBP49
|                  | - GBP32K1-GBP32K9                                                            |
Casting out a data set

You can cast out a data set from a series of online panels or by using the CASTOUT DATASET command.

Follow these steps to cast out a data set:

1. On the Group Buffer Pool List panel, type L in the Act field next to a group buffer pool that contains the data set you want to cast out and press Enter.

   The GBP Dependent Table Space List panel is displayed.

2. Type C in the Act field next to the data set you want to cast out, and press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Casting out a data set using the CASTOUT DATASET command

Use the following syntax to issue the CASTOUT DATASET command:

\[
\text{IN(DB2ssid@opertuneID) CASTOUT DATASET}
\]

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>catalog</td>
<td>Specify the name of the catalog for the data set that contains the table space to be cast out.</td>
</tr>
<tr>
<td>dataSet</td>
<td>Specify the DB2 subsystem ID or data sharing group name of the data set that contains the table space to be cast out.</td>
</tr>
<tr>
<td>tableSpace</td>
<td>Specify the name of the table space to be cast out.</td>
</tr>
</tbody>
</table>
Open data component operations

Use the Open Table Space List panel to perform the following operations:

- display data component information, volume information, and extent information for a volume

- change the secondary extent size

- invalidate any cached dynamic SQL that is associated with the selected table space

Select the Open data component operations option from the Operational Assist Menu to display the Open Table Space List panel (Figure 209).

Figure 209  Open Table Space List panel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>name</td>
<td>The name of the data set to be cast out.</td>
</tr>
</tbody>
</table>
Displaying data information

To find information about a table space, type L in the Act field next to the table space and press Enter. The Open Data Component List panel (Figure 210) is displayed.

**Figure 210  Open Data Set Component List panel**

From the Open Data Set Component List panel, you can obtain the following information about the listed table spaces:

- open data components for a table space
- directory component information for a table space
- volume and extent information for components in a table space
Data component information

To view data component information for a specific table space, type DD in the Act field for a specific data component and press Enter. The Data Component Information panel (Figure 211) lists the values associated with the selected component.

![Data Component Information panel](image)

Volume information

To view data component information for a specific table space, type DV in the Act field for a specific data component and press Enter. The Data Set Volume Information panel (Figure 212) lists the volumes that are associated with the selected component.

![Data Set Volume Information panel](image)

The following information is displayed on the Data Set Volume Information panel:
- volume ID
- number of extents
- high used relative byte address (HURBA)
- high allocated relative byte address (HARBA)
Extent information for a volume

From the Data Set Volume Information Panel, type **DE** in the Act field for a selected volume and press **Enter** to display the Data Extent Information panel (Figure 213).

Figure 213  Data Extent Information panel

The following information is displayed for each extent:

- Low CCHH—low cylinder cylinder head head address
- High CCHH—high cylinder cylinder head head address
- Tracks—size of the extent
- Low RBA—low relative byte address
- High RBA—high relative byte address
Filtering table spaces

If the list of table spaces is too long, use the FILTER command to restrict the number of table spaces that are displayed.

To filter the listing of table spaces, perform the following actions:

1. Type FILTER on the Command line and press Enter.

The Table Space Filter Specification Panel (Figure 202) allows you to filter the display of table spaces by the following ways:

- catalog name
- database name
- table space name

Figure 214 Table Space Filter Specifications panel

```
N/A  HB4               Table Space Filter Specification
Command ===>  
Update the entries below to specify how the table space list should be filtered. Then press Enter.

Filter Information
Catalog name ............
Database name .......... HB4
Table space name ........
```

2. Type the information you want to use to filter the table spaces into the appropriate fields, and press Enter. You can use wildcards as follows:

- ? can be substituted for any single character
- * can be substituted for one or more characters at the end of a specification

You will be returned to the Open Table Space List panel, but the table spaces will be filtered according to your specifications.
Changing the secondary extent size

You can change the secondary extent size from a series of panels or by issuing the CHANGESX command.

**NOTE**
This feature works only for user-managed data sets.

Follow these instructions to change the secondary extent size:

1. On the Open Table Space List panel, type **L** in the **Act** field next to the table space whose secondary extent you want to change, and press **Enter**.

   The Open Data Set Component List panel is displayed.

2. Type **C** in the **Act** field next to a data component and press **Enter**.

   The Change Secondary Extent Size panel is displayed.

**Figure 215 Change Secondary Extent Size panel**

3. Specify the following values and press **Enter**:
   - **New Allocation Unit**—the unit of allocation for the new secondary extent, either cylinders or tracks:
   - **New Secondary Extent Size**—the number of units for the new secondary extent size, either a numerical value in the range 1–999999, or a delta value

4. Issue the command from the Command Confirmation panel by typing **1** in the selection field and pressing **Enter**. To cancel the command, type **2** in the selection field and press **Enter**.
Changing the secondary extent size using the CHANGESX command

Use the following syntax to issue the CHANGESX command:

```
IN(DB2ssid@opertuneID) CHANGESX
```

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>dataSet</td>
<td>Specify the name of the data set for which the secondary extent size will be changed.</td>
</tr>
<tr>
<td>TRACKS CYLINDERS</td>
<td>The unit of allocation for the new secondary extent. Specify one of the following values:</td>
</tr>
<tr>
<td>size</td>
<td>Specify the number of units for the for the new secondary extent size:</td>
</tr>
<tr>
<td></td>
<td>a numerical value in the range 1—999999</td>
</tr>
<tr>
<td></td>
<td>a delta value</td>
</tr>
</tbody>
</table>

Use the following syntax to issue the CHANGESX command:

```
IN(DB2ssid@opertuneID) CHANGESX
```

Command syntax and parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>dataSet</td>
<td>Specify the name of the data set for which the secondary extent size will be changed.</td>
</tr>
<tr>
<td>TRACKS CYLINDERS</td>
<td>The unit of allocation for the new secondary extent. Specify one of the following values:</td>
</tr>
<tr>
<td>size</td>
<td>Specify the number of units for the for the new secondary extent size:</td>
</tr>
<tr>
<td></td>
<td>a numerical value in the range 1—999999</td>
</tr>
<tr>
<td></td>
<td>a delta value</td>
</tr>
</tbody>
</table>
Invalidating cached dynamic SQL

You can invalidate cached dynamic SQL from the Open Table Space List panel or by issuing the INVDCSQL command.

To invalidate cached dynamic SQL by using the panels, perform the following steps:

1. On the Open Table Space List Panel, type I in the Act field next to the table space whose SQL you want to invalidate.

2. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Invalidating cached dynamic SQL using the INDVCSQL command

Use the following syntax to issue the INVDCSQL command:

```
IN(DB2ssid@opertuneID) INVDCSQL
```

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>catalog</td>
<td>Specify the name of the catalog associated with the cached dynamic SQL.</td>
</tr>
<tr>
<td>database</td>
<td>Specify the name of the database associated with the cached dynamic SQL.</td>
</tr>
<tr>
<td>tableSpace</td>
<td>Specify the name of the table space associated with the cached dynamic SQL.</td>
</tr>
</tbody>
</table>
Reload DSNHDECP option default module

Select the **Reload DSNHDECP option default module** option from the Operational Assist Menu to display the Current DSNHDECP Parameters panel (Figure 216). Use this panel to initiate an immediate reload of the data-only DSNHDECP option module.

**Figure 216  Current DSNHDECP Parameters panel**

<table>
<thead>
<tr>
<th>Parameter Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 VERSION, RELEASE AND LEVEL</td>
<td>610</td>
</tr>
<tr>
<td>MACRO LEVEL CHANGE</td>
<td>V6R1M0</td>
</tr>
<tr>
<td>PERIOD/COMMA DEFAULT</td>
<td>PERIOD</td>
</tr>
<tr>
<td>YES/NO MIXED GRAPHIC DEFAULT</td>
<td>NO</td>
</tr>
<tr>
<td>CHARSET OPTION DEFAULT</td>
<td>ALPHANUM</td>
</tr>
<tr>
<td>DELIMITER DEFAULT</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>SQL DELIMITER DEFAULT</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>SUBSYSTEM DEFAULT</td>
<td>DFC</td>
</tr>
<tr>
<td>HOST LANGUAGE DEFAULT</td>
<td>IBMCOB</td>
</tr>
<tr>
<td>DATE FORMAT DEFAULT</td>
<td>USA</td>
</tr>
<tr>
<td>DATE LENGTH FORMAT DEFAULT</td>
<td>0</td>
</tr>
<tr>
<td>TIME FORMAT DEFAULT</td>
<td>USA</td>
</tr>
<tr>
<td>TIME LENGTH FORMAT DEFAULT</td>
<td>0</td>
</tr>
<tr>
<td>DECIMAL ARITHMETIC DEFAULT</td>
<td>DEC15</td>
</tr>
<tr>
<td>USE DECP FOR DYNAMIC RULES</td>
<td>YES</td>
</tr>
<tr>
<td>SBCS CCSID</td>
<td>37</td>
</tr>
<tr>
<td>MBCS CCSID</td>
<td>65534</td>
</tr>
<tr>
<td>GBCS CCSID</td>
<td>65534</td>
</tr>
<tr>
<td>SQL LANGUAGE LEVEL DEFAULT</td>
<td>DECPSDEF</td>
</tr>
</tbody>
</table>

To initiate a reload, perform the following steps:

1. **Type** `RELOAD` **on the Command line and press Enter.**

2. **Issue** the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Use the following syntax to issue the RELOAD DSNHDECP command manually:

```
IN(DB2ssid@opertuneID) RELOAD DSNHDECP
```

- `DB2ssid` is the subsystem ID of the DB2 to which the command applies
- `opertuneID` is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job)
Peer active logs

The Peer Active Log panel displays the peer logs that are allocated to a target subsystem even though the logs belong to a different subsystem. Select the Peer Log Operations option on the Operational Assist Menu to display the Peer Active Log List panel (Figure 217).

--- EXAMPLE ---
If DFA2 is your target subsystem and it performed a recovery job for DFA1, the logs for DFA1 are listed on the Peer Active Log List panel.

Figure 217  Peer Active Log List panel

You can remove peer logs by performing the following steps:

1  Type R in the Act field next to the peer log that you want to remove, and press Enter.

2  Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.
Table spaces in exception status

Select the **Tablespaces in exception status** option on the Operational Assist Menu to display the Table Space Exception List panel (Figure 218), which lists all of the entries in the Database Exception Table (DBET).

**Figure 218  Table Space Exception List panel**

From this panel you can issue the following commands against a table space:

- START DATABASE(database) SPACENAME(table space)
- STOP DATABASE(database) SPACENAME(table space)
- START DATABASE(database) SPACENAME(table space) ACCESS(FORCE)
Listing partition status

To list the status of all partitions in a specific table space, perform the following steps:

1 Type L in the Act field next to a table space and press Enter.

The Table Space Partition Exception List panel (Figure 219 on page 334) is displayed.

Figure 219 Table Space Partition Exception List panel

Table 4 describes the exception statuses for table spaces and partitions.

Table 4 Table space/partition exception statuses (part 1 of 3)

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARBDP</td>
<td>The index needs to be rebuilt to improve performance and allow DB2 to select this index for index-only access.</td>
</tr>
<tr>
<td>AREO*</td>
<td>The table space, index, or partition needs to be reorganized for best performance.</td>
</tr>
</tbody>
</table>
| ACHKP  | The table space is in an auxiliary check pending state. This status on a table space indicates that CHECK DATA detected one of the following conditions:  
- an orphan or missing LOB  
- an out-of-sync condition between the row in the base table and the LOB in the LOB table space |
### Table 4  Table space/partition exception statuses (part 2 of 3)

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
</table>
| AREST  | The object (a table space, index space, or a physical partition of a table space or index space) is in an advisory RESTART-pending state. If backout activity against the object is not already under way, it should be initiated in one of the following ways:  
  - by issuing the RECOVER POSTPONED command  
  - by recycling the system with the LBACKOUT=AUTO system parameter. |
| AUXW   | The table space is in an auxiliary warning state. On a LOB table space, this status indicates that one or more LOBs in the LOB table space is invalid.  
  On a base table space, this status indicates that CHECK DATA detected one of the following conditions:  
  - an orphan or missing LOB  
  - an out-of-sync condition between the row in the base table and the LOB in the LOB table space. |
| CHKP   | The object (a table space or a partition within a table space) is in CHECK-pending status. |
| COPY   | The object (a table space or a partition within a table space) is in COPY-pending status. An image copy is required for this object. |
| GRECP  | The object (a table space, a table space partition, index space, or index space partition) is marked recovery pending because a group buffer pool failed.  
  This status applies only to spaces. It does not apply to databases.  
  See the IBM DB2 Data Sharing reference documentation for information about resolving this restricted status. |
| ICOPY  | The object (an index space or index partition) is in informational COPY-pending status. |
| LPL    | The object has pages or ranges of pages that are unavailable because of logical or physical damage. |
| LSTOP  | The logical partition is stopped. |
| PSRBD  | The index space is in page set REBUILD-pending status. |
| RBDP   | The object (an index space, index partition or logical index partition) is in REBUILD-pending status. |
| RBDP*  | The logical partition of a non-partitioning index is in REBUILD-pending status. The entire index is inaccessible to SQL applications, but only the logical partition needs to be recovered. |
| RECP   | The object (a table space, table space partition, index space, index partition or logical index partition) is in RECOVER-pending status. |
| REFP   | The object (a table space, a table space partition, index space, or index space partition) is in REFRESH-pending status.  
  For a table space, run LOAD REPLACE or the RECOVER utility to resolve this restricted status, or use the REBUILD INDEX utility to rebuild the index from the data. |
| REORP  | The object (a table space or table space partition) is in REORG-pending status. |
Table 4  Table space/partition exception statuses  (part 3 of 3)

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTP</td>
<td>The object is in the RESTART-pending state. Backout activity against the object must be completed using one of the following methods:  &lt;ul&gt;&lt;li&gt;issuing the RECOVER POSTPONED command&lt;/li&gt;&lt;li&gt;recycling the system with the LBACKOUT=AUTO system parameter&lt;/li&gt;&lt;/ul&gt;</td>
</tr>
<tr>
<td>RO</td>
<td>The table space, table space partition, index space, or index space partition is started for read-only activity.</td>
</tr>
<tr>
<td>RW</td>
<td>The table space, table space partition, index space, or index space partition is started for read and write activity.</td>
</tr>
<tr>
<td>STOP</td>
<td>The table space, table space partition, index space, or index space partition is stopped.</td>
</tr>
<tr>
<td>STOPE</td>
<td>The table space or index space was implicitly stopped because there is a problem with the log RBA in a page. Message DSNT500I or DSNT501I is issued when the error is detected to indicate the inconsistency.</td>
</tr>
<tr>
<td>STOPP</td>
<td>A stop is pending for the database, table space, table space partition, index space, or index space partition.</td>
</tr>
<tr>
<td>UT</td>
<td>The table space, table space partition, index space, or index space partition is started for utility processing only.</td>
</tr>
</tbody>
</table>
| UTRO   | A utility is processing on the table space, table space partition, index space, or index space partition that allows only RO access.  
If the utility was canceled before the object was drained, the object can allow SQL access because the object was not altered by the utility. |
| UTRW   | A utility is processing on the table space, table space partition, index space or index space partition that allows RW access. |
| UTUT   | A utility is in process on the table space, table space partition, index space or index space partition that allows only UT access.  
If the utility was canceled before the object was drained, the object can allow SQL access because the object was not altered by the utility. |
| WEPR   | The object has pages or ranges of pages that are unavailable because of physical damage.  
To reset this flag, you can use either the RECOVER utility with the ERROR RANGE option or the LOAD utility with the REPLACE option. |
Terminating utility jobs

DB2 utility jobs can be terminated by using the Utility Jobs List panel or by issuing the TERM UTIL command. You can terminate an individual utility job, all utility jobs, all active jobs, or all stopped jobs from all target OPERTUNEs. You can also display the contents of a utility job. Select the Utility Job Status option from the Operational Assist Menu to display the Utility Jobs List panel (Figure 220).

Figure 220 Utility Jobs List panel

The following table describes the fields on the Utility Jobs List panel and the actions that can be performed from the panel.

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERM ALL</td>
<td>Terminate all jobs from all target OPERTUNEs</td>
</tr>
<tr>
<td>TERM ACTIVE</td>
<td>Terminate only the active jobs from all target OPERTUNEs</td>
</tr>
<tr>
<td>TERM STOPPED</td>
<td>Terminate only the stopped jobs from all target OPERTUNEs</td>
</tr>
<tr>
<td>T</td>
<td>Terminates only the selected job from the target OPERTUNEs</td>
</tr>
<tr>
<td>D</td>
<td>Displays the content of the selected utility job</td>
</tr>
<tr>
<td>Utility Name</td>
<td>Name or type of the utility job</td>
</tr>
<tr>
<td>Utility ID</td>
<td>Descriptive name of the utility job</td>
</tr>
<tr>
<td>SSID</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>Status</td>
<td>Status of the utility job. The status will be one of the following:</td>
</tr>
<tr>
<td></td>
<td>• ACTIVE—the job is currently running with no problems.</td>
</tr>
<tr>
<td></td>
<td>• STOPPED—the job has abnormally stopped running.</td>
</tr>
</tbody>
</table>
Terminating individual utility jobs

To cancel an individual utility job, perform the following steps:

1 On the Utility Jobs List panel, type T in the Act field next to the utility job that you want to terminate.

You can type T next to several jobs to terminate more than one job at a time.

2 Press Enter.

3 Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Terminating groups of utility jobs

To cancel an grouping of utility jobs, perform the following steps:

1 On the Utility Jobs List panel, type one of the following commands on the Command line:

   ■ TERM ALL
   ■ TERM ACTIVE
   ■ TERM STOPPED

2 Press Enter.

3 Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.
Displaying utility jobs

To display a utility job, perform the following steps:

1. On the Utility Jobs List panel, type D in the Act field next to the utility job that you want to display.

   You can type D next to several jobs to display more than one job at a time. If you display multiple utility jobs, they will be displayed together.

2. Press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.
Group profiles

This chapter presents the following topics:

Overview ................................................................. 341
Managing group profiles .............................................. 342
  Adding group profiles .............................................. 343
  Editing, deleting, and viewing group profiles ................. 347
Using the GROUP commands ....................................... 348
  Issuing the SET GROUP command ............................ 349
  Issuing the RESET GROUP command ......................... 350
  Issuing the QUERY GROUP Command ....................... 351

Overview

You can combine element and freeform commands into group profiles to be issued collectively. Group profiles are useful for setting parameters that meet the needs of a known work load, such as end-of-the-month processing.

Figure 221  Commands as part of a group

After you create a group profile, you can create a schedule profile to automatically issue the group commands at specified times. For more information about schedule profiles, see Chapter 6, “Schedule profiles.”
Managing group profiles

Select the Group profiles option from the Main Selection Menu to display the Profile Selection List panel (Figure 222). This panel lists all existing group profiles on the target OPERTUNE system.

**Figure 222  Profile Selection List panel**

Use the Profile Selection List panel to perform the following actions:

- add a new profile
- delete a profile from the list
- edit an existing profile
- view an existing profile
- issue a SET command
- issue a RESET command
- issue a QUERY command
Adding group profiles

Use the Group Profile panel to create a new group profile.

To access the Group Profile panel, type ADD profile-name on the Command line of the Profile Selection List panel and press Enter. The Group Profile panel is displayed (Figure 223). The Group Profile panel lists all currently active group profiles.

Figure 223  Group Profile panel

You can perform the following commands from the Group Profile panel:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD</td>
<td>Add elements to the group profile</td>
</tr>
<tr>
<td>COPY</td>
<td>Copy a group profile settings into the new group profile</td>
</tr>
<tr>
<td>UNDO</td>
<td>Cancel the changes you have made to the new group profile</td>
</tr>
<tr>
<td>CURRENT</td>
<td>Apply all elements to the group profile that have been changed since OPERTUNE was started, or since a RESET ALL command was performed</td>
</tr>
<tr>
<td>D-DELETE</td>
<td>Delete the selected element in the list</td>
</tr>
<tr>
<td>E-EDIT</td>
<td>Edit the selected element in the list</td>
</tr>
</tbody>
</table>

You can add a group profile by using one of the following methods:

- by using the ADD command
- by copying another profile using the COPY command
To add a new group profile by using the ADD command

1 Type ADD profileName on the Command line of the Profile Selection List panel and press Enter.

   The name of the new profile is inserted in the Profile Name field.

2 Type a description for the profile in the Description field. If you do not specify a description, the description will be DEFAULT PROFILE VALUES.

3 Add the element commands by selecting the element commands from a list, by adding an individual element to the group, or by building the commands manually.

To select elements from a list, perform the following steps:

A Type ADD (without a parameter) on the Command line, and press Enter.

B From the Element Selection List, select the elements you want the group to run by typing S in the Act field next to the element name and pressing Enter. You can select multiple elements.

   The panels for each element are displayed with their current values.

C Make any changes to the selected elements; then press Enter.

D Press F3 to exit from the Add Element Selection panel and return to the Group Profile panel. All of the elements that you selected and their values are displayed.

To add an individual element to the group, perform the following steps:

A Type ADD elementName on the Command line, and press Enter.

B From the corresponding element panel that is displayed, specify the values on the panel and press Enter.

   The command is added to the command list.

C Press F3 to exit and return to the Group Profile panel. All of the elements that you selected and their values are displayed.
To build commands manually, perform the following steps:

A Type ADD FREEFORM on the Command line and press Enter.

B From the Free Form Command panel, select the type of command you want to execute.

C Type the command syntax in the Command Area field, and press Enter.

For complete information about free form commands, see “Free form commands” on page 305.

D Press F3 to exit and return to the Group Profile panel. All of the elements that you selected (and their values) are displayed.

4 Press F3 to exit from the Group Profile panel and return to the Profile Selection List panel.

To add a new group profile by using the COPY command

You can create a new profile by copying an existing profile. If you already know the name of the profile you want to copy from, type COPY existingProfileName on the Command line and press Enter to copy all commands from the specified profile into the new profile.

If you do not know the profile you want to copy from, or the profile is on another OPERTUNE, perform these steps:

1 On the Profile Selection List panel, type COPY (without a parameter) on the Command line and press Enter to display the Profile Copy panel (Figure 224), which lists the existing group profiles.

**Figure 224 Profile Copy panel**
2 (optional) If the profile you want to copy is on another OPERTUNE, type the OPERTUNE name in the **OPERTUNE to Copy from** field, and press **Enter**. The Profile Copy panel is displayed, listing the Group Profiles for the specified OPERTUNE.

You can also type a question mark (?) in the **OPERTUNE to Copy From** field and press **Enter** to display a list of OPERTUNEs from which to choose.

**NOTE**

You cannot copy the commands from multiple existing group profiles. When you copy a group profile, all existing commands in the profile are replaced by the commands in the specified profile.

3 Select a profile from the list to copy all commands from the existing profile into the new profile by typing **S** in the **Act** field next to the profile name.

4 Press **Enter**. The commands are copied into the new profile.

5 Type a description for the profile in the **Description** field. If you do not specify a description, the description will be **DEFAULT PROFILE VALUES**.

6 Press **F3** to exit from the Group Profile panel and return to the Profile Selection List panel.

**Cancelling modifications to a profile by using the UNDO command**

Type UNDO on the **Command** line and press **Enter** to cancel all of the modifications you made to the profile without exiting the Group Profile panel.
Editing, deleting, and viewing group profiles

You can edit a group profile or delete it. You can also view the settings of a group profile.

To edit a group profile

To edit a group profile, perform the following steps:

1. From the Profile Selection List panel, type E in the Act field next to the profile you want to edit, and press Enter. The Group Profile panel (Figure 225) is displayed.

Figure 225  Group Profile panel

2. (optional) Add elements by performing the steps described in step 3 on page 344.

3. (optional) Change the elements to all elements that have been changed since OPERTUNE was started or since a RESET ALL command was performed by typing CURRENT on the Command line, and pressing Enter.

4. Edit an element by typing S in the Act field next to the element. You can select multiple elements.

The panels for each element are displayed with their current values.

A. Make any changes to the elements you have selected and press Enter after making each change.
Press F3 to exit from the Add Element Selection panel and return to the Group Profile panel. All of the elements you have selected and their values are displayed.

To delete a group profile

To delete a group profile, perform the following steps:

1. From the Profile Selection List panel, type D in the Act field next to the profile, and press Enter.

   The Profile Delete Confirmation panel is displayed.

2. Confirm the deletion by typing 1 in the selection field and press Enter. To cancel the command, type 2 in the selection field and press Enter.

To view a group profile

To view a group profile, perform the following steps:

1. From the Profile Selection List panel, type V in the Act field next to the group profile.

2. Press Enter. The Group Profile panel is displayed.

   All of the commands associated with the group profile are listed on the Group Profile panel. No actions can be taken to a group profile in the View mode.

Using the GROUP commands

The GROUP commands consist of three commands you can run:

- SET GROUP (“Issuing the SET GROUP command” on page 349)
- RESET GROUP (“Issuing the SET GROUP command” on page 349)
- QUERY GROUP (“Issuing the SET GROUP command” on page 349)

For more information about group, schedule, and element SET commands, see “Element command precedence” on page 55.
Issuing the SET GROUP command

The SET GROUP command issues the element commands in the group one after another in the order in which they appear in the group. The SET GROUP command requires the proper authority (see Chapter 8, “OPERTUNE security”).

To issue the SET GROUP command from the panels

1. From the Profile Selection List panel, type S in the Act field next to the group profiles you want to include in the SET GROUP command.

2. Press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Issuing the SET GROUP command

Use the following syntax to issue the SET GROUP command:

```
IN(DB2ssid@opertuneID) SET GROUP (groupName)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>groupName</td>
<td>The name of the group profile to which the SET command applies</td>
</tr>
</tbody>
</table>

Example

To set the command group GXAGRP1 for the DB2 subsystem DB2A under the control of OPERTUNE DDTA, issue the following command from the Free Form panel:

```
IN(DB2A@DDMA) SET GROUP (GXAGRP1)
```
Using the GROUP commands

Issuing the RESET GROUP command

The RESET GROUP command is essentially a RESET command for each element in the corresponding group. The RESET GROUP command requires the proper authority (see Chapter 8, “OPERTUNE security”).

To issue the RESET GROUP command from the panels

1. From the Profile Selection List panel, type R in the Act field next to the group profiles you want to include in the RESET GROUP command.

2. Press Enter.

3. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

NOTE

Individual element commands always override group commands. If you change an element’s value and then issue a RESET command for that element, OPERTUNE returns the element to its group value. If the element was not set in any group, then OPERTUNE resets it to its original ZPARM value. For details on the precedence of element and group commands, see “Element command precedence” on page 55.

Issuing the RESET GROUP command

Use the following syntax to issue the RESET GROUP command:

IN(DB2ssid@opertuneID) RESET GROUP (groupName)

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>groupName</td>
<td>The name of the group profile to which the RESET command applies</td>
</tr>
</tbody>
</table>

Example

To reset the group profile named NIGHTS in the DB2A subsystem, under the control of OPERTUNE DDMA, issue the following command from the Free Form panel:

IN(DB2A@DDMA) RESET GROUP (NIGHTS)
Issuing the QUERY GROUP Command

You can use the QUERY GROUP command and the Profile Selection List panel to determine which groups, if any, are in effect, and the current status of their individual elements. The QUERY GROUP command requires the proper authority (see Chapter 8, “OPERTUNE security”).

To issue the QUERY GROUP command from the panels

1. To determine which groups are in effect and list the current status of their individual elements, type Y in the Issue QUERY command field on the Profile Selection List panel.

2. To determine if a specific group profile is in effect and list the current status of its individual elements, type Q in the Act field next to the group name on the Profile Selection List panel.

3. Press Enter.

4. Issue the command from the Command Confirmation panel by typing 1 in the selection field and pressing Enter. To cancel the command, type 2 in the selection field and press Enter.

Issuing the QUERY GROUP command

Use the following syntax to issue the QUERY GROUP command:

```
IN(DB2ssid@opertuneID) QUERY GROUP (groupName)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>groupName</td>
<td>The name of the group profile to which the QUERY command applies</td>
</tr>
</tbody>
</table>

Example

To query all group profiles in OPERTUNE DDTA on DB2A, issue the following command from the Free Form panel:

```
IN(DB2A@DDTA) QUERY GROUP
```
Using the GROUP commands
Schedule profiles

This chapter presents the following topics:

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  Adding a new schedule profile .................................. 356
  Editing, deleting, and viewing schedule profiles .......... 360
  Implementing a permanent schedule ......................... 361
Using the SCHEDULE commands ................................. 362
  Issuing the SET SCHEDULE command ..................... 362
  Issuing the RESET SCHEDULE command ................. 363
  issuing the QUERY SCHEDULE command ................. 364

Overview

You can combine element and free form commands into groups that can be issued collectively. This is useful for setting parameters that meet the needs of a known work load, such as end-of-the-month processing.

Figure 226  Commands as part of a group
Schedules can be used to automatically issue group changes at the appropriate times. For example, you might want a group of ZPARMs to handle the heavy load of interactive, random-access programs running during the day. At night when sequential, batch programs are running, a second group of ZPARM settings is optimal. A third group could be used for weekends when the work load differs from weekday processing. One schedule can make all these changes, as shown in Figure 227.

Figure 227  Groups in a schedule
Managing schedule profiles

Before you create a schedule profile, you must create any group profiles that will be accessed by the schedule. See Chapter 5, “Group profiles” for more information about creating groups.

To create and edit schedules, you require the proper authority. To set a schedule, you also require the authority to execute each element in the profile. For more information about OPERTUNE security, see Chapter 8, “OPERTUNE security.”

Select the Schedule profiles option from the Main Selection Menu to display the Profile Selection List panel (Figure 228). The Profile Selection List panel lists all schedule profiles for the target OPERTUNE system.

Figure 228 Profile Selection List panel

Use the Profile Selection List panel to perform the following actions:

- add a new profile
- delete a profile from the list
- edit an existing profile
- view an existing profile
- issue a SET command
- issue a RESET command
- issue a QUERY command
Adding a new schedule profile

Before you create a schedule profile, you must create the group profiles to be included in the schedule. You can create a new schedule profile by using the following methods:

- add a new schedule profile by using the ADD command (see “To add a new schedule profile by using the ADD command” on page 357)
- add a new schedule profile by copying another profile using the COPY command (see “To copy a schedule profile” on page 359)

To access the Schedule Profile panel, by type ADD profileName on the Command line of the Profile Selection List panel and press Enter. The Schedule Profile panel is displayed as shown in Figure 229.

Figure 229  Schedule Profile panel

The Schedule Profile panel contains a table showing the days of the week, the hours of the day, and the groups in effect at various times. Each space in the table is a thirty-minute interval. The periods (.) in a schedule indicates that no group is in effect for that interval or timeslot.

NOTE

When no group is specified for a time period, OPERTUNE issues a RESET GROUP command to clear any group that is in effect.
Managing schedule profiles

The following commands can be issued from the Schedule Profile panel:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD</td>
<td>Add group profiles to the schedule profile</td>
</tr>
<tr>
<td>COPY</td>
<td>Copy a schedule profile settings into the new schedule profile</td>
</tr>
<tr>
<td>UNDO</td>
<td>Cancel the changes you have made to the new schedule profile</td>
</tr>
<tr>
<td>D-DELETE</td>
<td>Delete the selected group</td>
</tr>
<tr>
<td>V-VIEW</td>
<td>View the selected group</td>
</tr>
</tbody>
</table>

**To add a new schedule profile by using the ADD command**

1. Type `ADD profileName` on the Command line of the Profile Selection List panel and press Enter.

   The Schedule Profile panel is displayed.

2. (optional) Add a description for the profile in the Description field. If you do not specify a description, the description will be DEFAULT PROFILE.

3. Add the group profiles by using one of the following methods:
   - To select group profiles from a list, perform the following steps:
     - Type `ADD` (without a parameter) on the Command line, and press Enter.
     - From the Add Group Selection list, select all of the groups that you want to use in the schedule by typing S in the Act next to the group name.
     - Press F3 when you are finished selecting. The selected groups are added to the schedule profile.
     - OPERTUNE assigns a legend identifier to each group you add to the schedule profile. Use this identifier to insert the group into a specific time slot in the table. A schedule can have a maximum of eight groups.
   - To add an individual group to the schedule profile, type `ADD groupName` on the Command line, and press Enter. The corresponding group is added to the schedule profile.
     - OPERTUNE assigns a legend identifier to each group you add to the schedule profile. Use this identifier to insert the group into a specific time slot in the table. A schedule can have a maximum of eight groups.

4. (optional) You can delete a group from the schedule profile by typing D in the Act field next to the group, and pressing Enter.
5 Type the legend identifier for the group into a specific timeslot in the table.

Figure 230 on page 358 shows how to type the legend identifier for the following groups and timeslots:

<table>
<thead>
<tr>
<th>Legend</th>
<th>Name</th>
<th>Description</th>
<th>Timeslots</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GXADAY</td>
<td>Daytime Configuration</td>
<td>Monday through Friday 8am to 5pm</td>
</tr>
<tr>
<td>2</td>
<td>GXANIGHT</td>
<td>Night Time Configuration</td>
<td>Monday through Friday 5pm to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12am</td>
</tr>
<tr>
<td>3</td>
<td>GXAWEEK</td>
<td>Weekend Configuration</td>
<td>Saturday and Sunday 24 hours</td>
</tr>
</tbody>
</table>

Figure 230  Schedule Profile panel example

6 Press F3 when you are finished entering the timeslots to return to the Profile Selection List panel.
To copy a schedule profile

You can create a new schedule profile by copying an already-existing profile. If you know the profile name you want to copy from, you can type `COPY existingProfileName` on the Command line and press Enter to copy the schedule from the specified profile into the new profile.

If you do not know the profile name you want to copy from, or the profile is on another OPERTUNE, perform these steps to copy a profile:

1. On the Profile Selection List panel, type `COPY` (without a parameter) on the Command line and press Enter to display the Profile Copy panel (Figure 231), which lists the existing schedule profiles.

Figure 231 Profile Copy panel

<table>
<thead>
<tr>
<th>OPERTUNE to copy from</th>
<th>N/A (? for list)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command ====&gt;</td>
<td>Profile Copy</td>
</tr>
<tr>
<td>Row 1 to 8 of 8</td>
<td>Scroll ===&gt; PAGE</td>
</tr>
</tbody>
</table>

Select the desired SCHEDULE and press Enter.

2. (optional) If the profile you want to copy is on another OPERTUNE, type the OPERTUNE name in the OPERTUNE to Copy from field to specify that OPERTUNE, and press Enter. The Profile Copy panel is displayed, listing the Schedule Profiles for the specified OPERTUNE.

You can also type a question mark (?) in the OPERTUNE to Copy From field and press Enter to display a list of OPERTUNEs from which to choose.

3. Select a schedule profile from the list to copy all commands from the existing schedule profile into the new profile by typing `S` in the Act field next to the schedule profile name.

4. Press Enter. The schedule profile settings are copied into the new schedule profile.
Managing schedule profiles

5 Type a description for the profile in the Description field. If you do not specify a description, the description will be DEFAULT PROFILE VALUES.

6 Press F3 to exit from the Schedule Profile panel and return to the Profile Selection List panel.

Cancelling modifications to a profile by using the UNDO command

Type UNDO on the Command line and press Enter to cancel all of the modifications you made to the profile without exiting the Schedule Profile panel.

Editing, deleting, and viewing schedule profiles

You can edit a schedule profile or delete it. You can also view the settings of a schedule profile.

To edit a schedule profile

To edit a schedule profile, perform the following steps:

1 On the Profile Selection List panel, type E next to the schedule profile you want to edit and press Enter.

The Schedule Profile panel is displayed.

2 (optional) Add a description for the profile in the Description field. If you do not specify a description, the description will be DEFAULT PROFILE VALUES.

3 Add the group profiles by using one of the following methods:

- To select group profiles from a list, perform the following steps:

  A Type ADD (without a parameter) on the Command line, and press Enter.

  B From the Add Group Selection list, select all of the groups that you want to use in the schedule by typing S in the Act next to the group name.

  C Press F3 (Exit) when you are finished selecting. The selected groups are added to the schedule profile.

OPERTUNE assigns a legend identifier to each group you add to the schedule profile. Use this identifier to insert the group into a specific time slot in the table. A schedule can have a maximum of eight groups.
To add an individual group to the schedule profile, type `ADD groupName` on the Command line, and press Enter. The corresponding group is added to the schedule profile.

OPERTUNE assigns a legend identifier to each group you add to the schedule profile. Use this identifier to insert the group into a specific time slot in the table. A schedule can have a maximum of eight groups.

4 (optional) You can delete a group from the schedule profile by typing `D` in the Act field next to the group, and pressing Enter.

5 Type the legend identifier for the group into a specific timeslot in the table.

6 Press F3 when you are finished to return to the Profile Selection List panel.

To delete a schedule profile

To delete a schedule profile, perform the following steps:

1 From the Profile Selection List panel, type `D` in the Act field next to the schedule profile and press Enter.

The Profile Delete Confirmation panel is displayed.

2 Confirm the deletion by typing `1` in the selection field and press Enter. To cancel the command, type `2` in the selection field and press Enter.

To view a group profile

To view a group profile, perform the following steps:

1 From the Profile Selection List panel, type `V` in the Act field next to the group profile.

2 Press Enter. The Group Profile panel is displayed.

All of the commands associated with the group profile are listed on the Group Profile panel. No actions can be taken to a group profile in View mode.

Implementing a permanent schedule

To retain the values in a schedule and have OPERTUNE reapply those changes each time OPERTUNE initializes, add the schedule command to the OPERTUNE system profile. For more information on initial commands for an OPERTUNE system, see “Types of profile entries” on page 405.
Using the SCHEDULE commands

There are three SCHEDULE commands available:

- SET SCHEDULE (“Issuing the SET SCHEDULE command” on page 362)
- RESET SCHEDULE (“Issuing the RESET SCHEDULE command” on page 363)
- QUERY SCHEDULE (“issuing the QUERY SCHEDULE command” on page 364)

These commands require the proper authority (see Chapter 8, “OPERTUNE security”).

For details on the precedence of element and group commands, see “Element command precedence” on page 55. For information on group profiles, see Chapter 5, “Group profiles.”

Issuing the SET SCHEDULE command

You can issue the SET SCHEDULE command from the Profile Selection List panel or from the Free Form panel.

To issue the SET SCHEDULE command from the Profile Selection List panel

1. Type S in the Act field next to the schedule profiles you want to include in the SET SCHEDULE command.

2. Press Enter. The Command Confirmation panel is displayed.

3. To issue the command, type 1 in the selection field and press Enter. To cancel the command, type 2 in the selection field and press Enter.

When the command is issued, the schedule command processor reads the schedule, determines which group, if any, should be in effect, and issues a SET GROUP command for that group. OPERTUNE then determines when the next change is to take effect and sets a timer so that the next schedule change occurs at the appropriate time.
To issue the SET SCHEDULE command from the Free Form panel

Use the following syntax to issue the SET SCHEDULE command:

```
IN(DB2ssid@opertuneID) SET SCHEDULE (scheduleName)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>scheduleName</td>
<td>The name of the schedule profile to which the SET command applies</td>
</tr>
</tbody>
</table>

**Example**

To set the schedule GXASHD1 for the DB2 subsystem DB2A under the control of OPERTUNE DDTA, issue the following command from the Free Form panel:

```
IN(DB2A@DDTA) SET SCHEDULE (GXASHD1)
```

Issuing the RESET SCHEDULE command

A RESET SCHEDULE command affects any group that is in effect because of the schedule.

You can issue the SET SCHEDULE command from the Profile Selection List panel or from the Free Form panel.

**To issue the RESET SCHEDULE command from the Profile Selection List panel**

1. From the Profile Selection List panel, type R in the Act field next to the schedule profiles you want to include in the RESET SCHEDULE command.

2. Press Enter. The Command Confirmation panel is displayed.

3. To issue the command, type 1 in the selection field and press Enter. To cancel the command, type 2 in the selection field and press Enter.
Using the SCHEDULE commands

NOTE

Individual element commands always override group commands. If you change an element’s value and then issue a RESET command for that element, OPERTUNE returns the element to its group value. If the element was not set in any group, then OPERTUNE resets it to its original ZPARM value. For details on the precedence of element and group commands, see “Element command precedence” on page 55.

To issue the RESET SCHEDULE command from the Free Form panel

Use the following syntax:

\[
\text{IN(}DB2ssid@opertuneID) \quad \text{RESET SCHEDULE} \quad (\quad \text{scheduleName} \quad )
\]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>scheduleName</td>
<td>The name of the schedule profile to which the RESET command applies</td>
</tr>
</tbody>
</table>

Example

To reset the NIGHTS schedule profile in the subsystem DB2A, under the control of OPERTUNE DDTA, issue the following command from the Free Form panel:

\[
\text{IN(}DB2A@DDTA) \quad \text{RESET SCHEDULE} \quad (\quad \text{NIGHTS} \quad )
\]

issuing the QUERY SCHEDULE command

Use the QUERY SCHEDULE command to see which schedule, if any, is in effect. If a schedule is in effect, the current status of the individual elements are shown.

You can issue the SET SCHEDULE command from the Profile Selection List panel or from the Free Form panel.
To issue the QUERY SCHEDULE command from the Profile Selection List panel

1. To determine which schedules are in effect and list the current status of their individual elements, type Y in the Issue QUERY command field on the Profile Selection List panel.

2. To determine if a specific schedule profile is in effect and list the current status of its individual elements, type Q in the Act field next to the group name on the Profile Selection List panel.

3. Press Enter. The Command Confirmation panel is displayed.

4. To issue the command, type 1 in the selection field and press Enter. To cancel the command, type 2 in the selection field and press Enter.

To issue the QUERY SCHEDULE command from the Free Form panel

Use the following syntax:

```
IN(DB2ssid@opertuneID) QUERY SCHEDULE (scheduleName)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>scheduleName</td>
<td>The name of the schedule profile to which the QUERY command applies</td>
</tr>
</tbody>
</table>

Example

To query the schedule profiles in OPERTUNE DDTA, issue the following command from the Free Form panel:

```
IN(DB2A@DDTA) QUERY SCHEDULE
```
Using the SCHEDULE commands
Additional commands

This chapter presents the following topics:

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Overview

OPERTUNE offers a variety of commands:

- Element commands are described in Chapter 3, “OPERTUNE elements.”
- Operational assist commands are described in Chapter 4, “Operational Assists.”
- Group commands are described in Chapter 5, “Group profiles.”
- Schedule commands are described in Chapter 6, “Schedule profiles.”

All other OPERTUNE commands are described in this chapter.

ALTER commands

This section describes the ALTER commands available with OPERTUNE. The ALTER commands are used to change your system profile variables dynamically. These changes remain in effect only while the OPERTUNE system is active. The actual profile values in the system profile are not changed and are in effect the next time OPERTUNE is activated. To issue ALTER commands, the DDTOPER user profile must be authorized for the appropriate ALTER command. For more information on system profile variables, see “System profiles” on page 389.

Use the following syntax to issue the ALTER commands:

```
/F opertuneID,ALTER
```

*opertuneID* is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job).

ALTER ACTIVATE command

Use the ALTER ACTIVATE command to add a license for OPERTUNE to access DB2 without cycling OPERTUNE.

```
ALERT ACTIVATE DB2
```
ALTER ADDSYS command

Use the ALTER ADDSYS command to place a new DB2 subsystem under the control of OPERTUNE. The specified subsystem must not already be under the control of another OPERTUNE.

Command syntax and parameters

```
ALTER ADDSYS (DB2ssid)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID to be added</td>
</tr>
</tbody>
</table>

ALTER APPLID command

Using the ALTER APPLID command is like recycling OPERTUNE from a VTAM point of view. OPERTUNE stops using the previous APPLID and begins to use the APPLID specified in the command. All previous VTAM commands issued are no longer in effect.

Command syntax and parameters

```
ALTER APPLID (applID -NONE-)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>applID</td>
<td>The application ID of the VTAM to be used</td>
</tr>
<tr>
<td>-NONE-</td>
<td>VTAM will no longer be used</td>
</tr>
</tbody>
</table>
ALTER BUFSIZE command

Use the ALTER BUFSIZE command to change the number of records returned by the HISTORY command.

Command syntax and parameters

```
ALTER BUFSIZE (value)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>value</td>
<td>The number of records you want returned by the HISTORY command. Each record uses 80 bytes. Specify a numerical value in the range 10–1000.</td>
</tr>
</tbody>
</table>

ALTER LOG command

Use the ALTER LOG command to close the current audit log (if any) and open the log specified in the command parameters. The parameters allow for either a SYSOUT or an existing data set.

Command syntax and parameters

```
ALTER LOG (DA (dataSet) SYSOUT (class) SUBSYSTEM (DB2ssid))
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dataSet</td>
<td>The name of the audit log data set to be opened. The data set attributes should be RECFM=FB and LRECL=121.</td>
</tr>
<tr>
<td>class</td>
<td>The SYSOUT class for the log to be opened.</td>
</tr>
<tr>
<td>DB2ssid</td>
<td>The subsystem ID of the DB2 the log will audit.</td>
</tr>
</tbody>
</table>
ALTER RECINIT command

Use the ALTER RECINIT command to select whether to record the initial values of all subsystem parameters in the audit log.

**Command syntax and parameters**

```
ALTER RECINIT ( Y N )
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Initial values of all subsystem parameters will be recorded in the audit log.</td>
</tr>
<tr>
<td>N</td>
<td>Initial values of all subsystem parameters will not be recorded in the audit log.</td>
</tr>
</tbody>
</table>

ALTER REMSYS command

Use the ALTER REMSYS command to remove control of the specified DB2 subsystem from the current OPERTUNE. A RESET ALL is issued for the subsystem before relinquishing control.

**Command syntax and parameters**

```
ALTER REMSYS ( DB2ssid )
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>The subsystem ID of the DB2 you want to remove.</td>
</tr>
</tbody>
</table>
ALTER RUSIZE command

Use the ALTER RUSIZE command to change the maximum size of the VTAM buffer that is used to send requests and responses between OPERTUNE systems.

Command syntax and parameters

```
ALTER RUSIZE (size)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
</table>
| size  | Specify the maximum size of the VTAM request unit buffer (the buffer used to send requests and responses between OPERTUNE systems).

If you specify 0, the default value of 60 KB is used. If your network requires a smaller size, specify it here. The value specified must be a valid VTAM RUSIZE that can be specified as M*2**E:

- M—the mantissa; must be 8 to 15
- E—the exponent; must be 5 to 12

The smallest RUSIZE is 256 (8*2**5) and the largest is 60 KB (15*2**12). If the default value is not used, all OPERTUNEs that communicate with each other must have the same VTAM RUSIZE.

ALTER SAMPFREQ command

Use the ALTER SAMPFREQ command to specify how often the system checks to see whether a DB2 subsystem has been shut down or brought up. The new sample frequency takes effect after the current sample frequency has cycled.

Command syntax and parameters

```
ALTER SAMPFREQ (value)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>value</td>
<td>Specify the amount of time (in seconds) that you want the system to wait between checks to see if a DB2 subsystem has been shut down or brought up. Specify a numerical value in the range 1–99.</td>
</tr>
</tbody>
</table>
ALTER SYNC TIME command

Use the ALTER SYNC TIME command to specify the interval that will elapse between issuing BMC31797 messages when a FREE TABLESPACE or STOP TABLESPACE command has not completed. The new value takes effect after the current interval expires.

Command syntax and parameters

```
ALTER SYNC TIME ( value )
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>value</td>
<td>Specify the amount of time (in seconds) that you want the system to wait between issuing BMC31797 messages. Specify a numerical value in the range 60–3600 or 0 to prevent BMC31797 messages.</td>
</tr>
</tbody>
</table>

ALTER SYSLOG command

Use the ALTER SYSLOG command to enable or disable the writing of dialog commands/responses to the SYSLOG.

Command syntax and parameters

```
ALTER SYSLOG ( Y N )
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Enable writing of dialog commands and responses to the SYSLOG.</td>
</tr>
<tr>
<td>N</td>
<td>Disable writing of dialog commands and responses to the SYSLOG.</td>
</tr>
</tbody>
</table>
ALTER commands

ALTER TRACE command

Use the ALTER TRACE command to dynamically turn the tracing of user requests on or off for the OPERTUNE started task. Tracing is useful for problem diagnosis. You must specify the DDTTRACE DDNAME in the OPERTUNE started task procedure or batch job JCL to be able to turn on the tracing of user requests. Tracing is turned off by default.

Command syntax and parameters

The ALTER command does not allow specification of the subsystem recognition character because it is not a DB2 command.

```
ALTER TRACE (Y N)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Enable tracing of user requests.</td>
</tr>
<tr>
<td>N</td>
<td>Disable tracing of user requests.</td>
</tr>
</tbody>
</table>

ALTER UNITVAL command

Use the ALTER UNITVAL command to specify whether unit names are validated when a command changes a unit name.

Command syntax and parameters

```
ALTER UNITVAL (Y N)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Unit names are validated when a command changes a unit name.</td>
</tr>
<tr>
<td>N</td>
<td>Unit names are not validated when a command changes a unit name.</td>
</tr>
</tbody>
</table>
ALTER XCF command

Use the ALTER XCF command to change the OPERTUNE group name.

Command syntax and parameters

```
ALTER XCF (groupName)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>groupName</code></td>
<td>The OPERTUNE group name to which the command applies.</td>
</tr>
</tbody>
</table>
DISPLAY commands

This section describes the DISPLAY commands available with OPERTUNE. The DISPLAY commands provide LUWID information, archive log BSDS messages, active log messages, and information about which DB2 the target OPERTUNE controls.

Use the following syntax to issue the DISPLAY commands:

```
IN(DB2ssid@opertuneID) DISPLAY
```

- **DB2ssid** is the subsystem ID of the DB2 to which the command applies
- **opertuneID** is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job)

**DISPLAY THREAD command**

Because the native DB2 DISPLAY THREAD command does not provide the LUWID for nondistributed threads, OPERTUNE provides its own DISPLAY THREAD command that does provide LUWID information.

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>
DISPLAY ARCHIVE command

Use the DISPLAY ARCHIVE command to display a BMC31690I message for each archive log BSDS entry, including information similar to that found on the Archive Log BSDS Entry List panel (data set name, copy, volume, unit, and catalog).

Command syntax and parameters

```
IN(DB2ssid@opertuneID)   DISPLAY ARCHIVE
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>

DISPLAY LOG command

Use the DISPLAY LOG command to display a BMC31657I message for each currently defined active log entry, including information similar to that found on the Add/Remove Active Logs panel (active log data set name, copy, status, and an indicator of whether the log is removable without using the FORCE parameter).

Command syntax and parameters

```
IN(DB2ssid@opertuneID)   DISPLAY LOG
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>
DISPLAY SUBSYSTEM command

Use the DISPLAY SUBSYSTEM command to display the DB2 subsystems that the target OPERTUNE system controls.

Command syntax and parameters

```
IN(DB2ssid@opertuneID)   DISPLAY SUBSYSTEM
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>db2</code></td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td><code>opertuneID</code></td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>

Other commands

This section describes the HISTORY, QUERY ALL, and RESET ALL commands. The HISTORY and QUERY ALL commands are informational. The RESET ALL command allows you to return elements, groups, and schedules to their original values.

HISTORY command

Use the HISTORY command to display a recent audit log of changes made to all of the subsystems under the control of your OPERTUNE. The number of messages returned depends on the Log Buffer Size parameter set in the system profile (see “System profiles” on page 389).

The command syntax for the HISTORY command is as follows:

```
HISTORY
```

The HISTORY command does not allow the specification of the subsystem recognition character because it is not a subsystem command.
QUERY ALL command

Use the QUERY ALL command to display all changes that have been implemented for a specific subsystem. The current status of elements, groups, and schedules along with their original values are provided.

Command syntax and parameters

\[ \text{IN(DB2ssid@opertuneID)} \quad \text{QUERY ALL} \]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>

RESET ALL command

Use the RESET ALL command to issue a RESET command against the specified subsystem for all implemented elements, groups, and schedules, returning them to their original values. This command is automatically issued for each subsystem when OPERTUNE is stopped.

Command syntax and parameters

\[ \text{IN(DB2ssid@opertuneID)} \quad \text{RESET ALL} \]

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>DB2 subsystem ID or the name of the DB2 data sharing group to which the command applies.</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
</tbody>
</table>
SHOW ELEMENTS command

Use the SHOW ELEMENTS command to produce a list of the current element values for the target DB2, or to produce a list of only the elements that are different between two DB2 subsystems.

Command Syntax and Parameters

```
IN(DB2ssid@opertuneID) SHOW ELEMENTS UNLIKE(DB2ssid2)
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>The target DB2. If the command is issued without the UNLIKE parameter, all current element values for this subsystem will be returned. If the UNLIKE parameter is specified, only the element values for this subsystem that are different from the element values for DB2ssid2 will be returned (see Figure 232 on page 382).</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>DB2ssid2</td>
<td>Specify a DB2 subsystem with which to compare the values for the target DB2. No values are returned for this subsystem.</td>
</tr>
</tbody>
</table>
SHOW ZPARMS command

Use the SHOW ZPARMS command to produce a list of the current ZPARM values for the target DB2, or to produce a list of only the ZPARMs that are different between two DB2 subsystems. You can also show ZPARMs found in specific control blocks or macros.

Command Syntax and Parameters

```
IN(DB2ssid@opertuneID) SHOW ZPARMS

UNLIKE(DB2ssid2)
   ALT
   SPRM
   SYSP
   FAC
   ARVP
   LOGP
   GRP
   DECP
```

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2ssid</td>
<td>The target DB2. If the command is issued without the UNLIKE parameter, all current ZPARM values for this subsystem will be returned. If the UNLIKE parameter is specified, only the ZPARM values for this subsystem that are different from the ZPARM values for DB2-2 will be returned (see Figure 232).</td>
</tr>
<tr>
<td>opertuneID</td>
<td>The OPERTUNE system profile name (if OPERTUNE is running as a started task) or the batch job name (if OPERTUNE is running as a batch job)</td>
</tr>
<tr>
<td>UNLIKE(DB2ssid2)</td>
<td>Show all ZPARMS that are unlike the values for the target DB2 (DB2-2). You must specify a DB2 subsystem if you use this option.</td>
</tr>
<tr>
<td>ALT</td>
<td>Show all ZPARMS that are alterable by using OPERTUNE</td>
</tr>
<tr>
<td>SPRM</td>
<td>Show only the ZPARMS that are found in the DSN6SPRM control block or macro.</td>
</tr>
<tr>
<td>SYSP</td>
<td>Show only the ZPARMS that are found in the DSN6SYSP control block or macro.</td>
</tr>
<tr>
<td>FAC</td>
<td>Show only the ZPARMS that are found in the DSN6FAC control block or macro.</td>
</tr>
<tr>
<td>LOGP</td>
<td>Show only the ZPARMS that are found in the DSN6LOGP control block or macro.</td>
</tr>
<tr>
<td>GRP</td>
<td>Show only the ZPARMS that are found in the DSN6GRP control block or macro.</td>
</tr>
<tr>
<td>DECP</td>
<td>Show only the ZPARMS that are found in the DSN6DECP control block or macro.</td>
</tr>
</tbody>
</table>
Start and stop commands

This section describes the commands used to start and stop OPERTUNE.

Start OPERTUNE

Use the following command to start OPERTUNE:

```
$ opertuneProc,parameters
```

- `opertuneProc` is the name of the OPERTUNE procedure in your PROCLIB
- `parameters` are the optional parameters used to start the procedure.

OPERTUNE can also be started as a batch job by coding the equivalent JCL statements in a batch job stream as follows:

```
//OPERTUNE EXEC opertuneProc,parameters
```
Stop OPERTUNE

Use the following command to stop OPERTUNE:

\[ opertuneID \]

\textit{opertuneID} is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job).

**SHUTDOWN command**

Use the SHUTDOWN command with the NORESET option to stop OPERTUNE without resetting the ZPARMs of the indicated subsystems to their original values. If the NORESET option is not specified, OPERTUNE is stopped as if \textit{opertuneID} was issued. If the NORESET option is specified, subsystems to be included are specified as follows:

The following command causes the specified OPERTUNE to terminate without resetting the ZPARMs for DB2P.

\[ opertuneID,\text{SHUTDOWN NORESET (DB2P)} \]

The following command causes the specified OPERTUNE to terminate without resetting the ZPARMs for DB2X and DB2Y.

\[ opertuneID,\text{SHUTDOWN NORESET (DB2X,DB2Y)} \]

This command causes the specified OPERTUNE to terminate without resetting the ZPARMs for all subsystems under OPERTUNE control.

\[ opertuneID,\text{SHUTDOWN NORESET (*)} \]

**Command syntax and parameters**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORESET</td>
<td>The indicated DB2 subsystems are terminated without resetting the ZPARMs.</td>
</tr>
<tr>
<td>DB2ssid</td>
<td>The subsystem ID of a DB2 subsystem to be terminated.</td>
</tr>
<tr>
<td>*</td>
<td>All DB@ subsystems will be terminated.</td>
</tr>
</tbody>
</table>
The MAINT command is a diagnostics aid to BMC Software Customer Support. Use the MAINT command to return a message with the OPERTUNE version number and any PTF that has been applied to the OPERTUNE started task. The syntax for the MAINT command is as follows:

```
MAINT
```

The MAINT command does not allow specification of the subsystem recognition character because it is not a subsystem command.
# OPERTUNE security

This chapter presents the following topics:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>386</td>
</tr>
<tr>
<td>Default profiles</td>
<td>387</td>
</tr>
<tr>
<td>Implementing security</td>
<td>387</td>
</tr>
<tr>
<td>Administrative/Utilities menu</td>
<td>388</td>
</tr>
<tr>
<td>System profiles</td>
<td>389</td>
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<td>System Profile panel</td>
<td>389</td>
</tr>
<tr>
<td>Creating system profiles</td>
<td>392</td>
</tr>
<tr>
<td>Editing, viewing or deleting system profiles</td>
<td>398</td>
</tr>
<tr>
<td>Security profiles</td>
<td>400</td>
</tr>
<tr>
<td>Creating a security profile</td>
<td>401</td>
</tr>
<tr>
<td>Editing, viewing and deleting security profiles</td>
<td>403</td>
</tr>
<tr>
<td>User profiles</td>
<td>405</td>
</tr>
<tr>
<td>About user profiles</td>
<td>405</td>
</tr>
<tr>
<td>User profile panel</td>
<td>409</td>
</tr>
<tr>
<td>Creating a user profile</td>
<td>410</td>
</tr>
<tr>
<td>Editing, viewing and deleting user profiles</td>
<td>413</td>
</tr>
<tr>
<td>Profile enqueue maintenance</td>
<td>415</td>
</tr>
<tr>
<td>Implementing the interface between OPERTUNE and RACF or ACF2</td>
<td>416</td>
</tr>
<tr>
<td>Using RACF security</td>
<td>416</td>
</tr>
<tr>
<td>Using ACF2 security</td>
<td>419</td>
</tr>
<tr>
<td>Securing OPERTUNE by function</td>
<td>422</td>
</tr>
</tbody>
</table>
OPERTUNE provides two options for securing access to its features:

- Security provided by OPERTUNE, in the form of user, system, and security profiles stored in the profile VSAM data set. Figure 233 on page 386 shows an overview of the security features provided by OPERTUNE.

- An OPERTUNE security exit that interfaces with products like RACF or ACF2, activated by assembling and linking the default exit into the OPERTUNE load library.

You can choose either of these options, or a combination of both, by setting the appropriate return code in the security user exit.

**Figure 233  OPERTUNE security overview**

![Diagram of OPERTUNE security overview with system profiles, security profiles, and user profiles.](image-url)
Default profiles

When OPERTUNE is installed, default system, security, and user profiles are created.

- default system profile
  The system profile defines the subsystems, the initial commands used when OPERTUNE starts, and the VTAM APPLIDs for the OPERTUNE system. When OPERTUNE is installed, a default system profile named OPRX is created. This default system profile allows you to start OPERTUNE and create system profiles for the other OPERTUNEs required at your site. As created, OPRX has complete access to all of the DB2 subsystems.

  You can define multiple OPERTUNEs on each MVS image. Each OPERTUNE can control multiple subsystems. However, each subsystem can be under the control of only one OPERTUNE.

- default security profile
  When OPERTUNE is installed, a default security profile named DEFAULT is created. This profile has complete access to all OPERTUNE functions. Create other security profiles as necessary.

- default user profile
  When OPERTUNE is installed, a default user profile named * is created. This user profile has the authorizations granted in the DEFAULT security profile, for all subsystems. To secure OPERTUNE features by user, you must create a user profile for each user and assign authorizations to each user as necessary.

  OPERTUNE recognizes two special user profiles:

  — *—the profile used if a user does not have a specific profile
  — DDTOPER—the profile used for commands issued from the operator console. If the DDTOPER user profile is not created, the operator has the same authorizations as the * user.

Implementing security

If you prefer to use RACF, ACF2, or a similar security system, see “Implementing the interface between OPERTUNE and RACF or ACF2” on page 416. This may be more useful if a large number of people will use OPERTUNE.
If a small number of people will use OPERTUNE, follow this process to implement the security features of OPERTUNE:

1. Define system profiles for each OPERTUNE system required at your site, using the information in “System profiles” on page 389.

2. Define security profiles as necessary, using the information in “Security profiles” on page 400.

3. Define user profiles, using the information in “User profiles” on page 405. Be sure to update or delete the DEFAULT user profile to prevent unwanted access to OPERTUNE features.

NOTE
You must have an entry in the AUTHPGM section of the IKJTSOxx member for the DDTTAUTH program.

Administrative/Utilities menu

Select the Administrative/Utilities option from the Main Selection Menu to display the Administrative/Utilities Menu (Figure 234). All OPERTUNE profile settings are accessible from this menu.

Figure 234 Administrative/Utilities Menu

DDTG DBI1         Administrative/Utilities Menu
Command ===> _________________________________________________________________

Choose one of the following by number. Then press Enter.

Administrative
  1. User profiles
  2. OPERTUNE system profiles
  3. Security profiles
Product Specific
  4. BMC product authorization
  5. Maintenance level
Miscellaneous
  6. Customize user preferences
  7. Profile enqueue maintenance
  8. Tracing switch
  9. Reload OPERTUNE exits
 10. BMC active product query
Target Selection
 11. Host OPERTUNE selection
 12. Target OPERTUNE selection
 13. Target subsystem selection
System profiles

When OPERTUNE is installed, a default system profile named OPRX is created. This default system profile allows you to start OPERTUNE and create system profiles for the other OPERTUNEs required at your site. As created, OPRX has complete access to all of the DB2 subsystems.

The system profile defines the subsystems, the initial commands used when OPERTUNE starts, and the VTAM APPLIDs for the OPERTUNE system. You can define multiple OPERTUNEs on each MVS image. Each OPERTUNE can control multiple subsystems. However, each subsystem can be under the control of only one OPERTUNE.

Defining system profiles is the first step in implementing security for OPERTUNE.

System Profile panel

Select the OPERTUNE system profiles option from the Administrative/Utilities Menu to display the Profile Selection List panel. The System Profile panel (Figure 235) is accessed from the Profile Selection panel when you add, edit, delete, or view a system profile. From this panel you can copy a system profile or undo changes you have made to a system profile.

Figure 235  System Profile Panel

<table>
<thead>
<tr>
<th>DDTAPSY</th>
<th>D</th>
<th>System Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command ===</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Profile name . . . . . . . : 80
Description . . . . . . . : DEFAULT PROFILE VALUES
VTAM applid . . . . . . .
VTAM RUSIZE . . . . . . . : 0 (0=default, see HELP for valid values)
XCF group name . . . . . . : XCFDDT
Sample frequency . . . . . : 60 (1-99)
Log buffer size . . . . . . : 100 (10-100)
Write messages to syslog . . . : Y (Y or N)
Use extended security . . . . : Y (Y or N)
Validate unit names . . . . : Y (Y or N)
Record initial values . . . : Y (Y or N)
Call Data Collector . . . . : Y (Y or N)
Display initial commands . . : Y (Y or N)
Display subsystem list . . . : Y (Y or N)
Display VTAM connections . . : Y (Y or N)
Wto Sync Elapsed Time . . . : 0 (0, 60-3600 seconds)
The input fields on the System Profile panel are described in the following table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAM applid</td>
<td>The VTAM application ID (used for remote communications). See Chapter 9, “VTAM support” for more information.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER APPLID command (page 369) to change this value dynamically.</td>
</tr>
<tr>
<td>VTAM RUSIZE.</td>
<td>Maximum VTAM buffer size that is used to send requests and responses between OPERTUNE systems. If you specify 0, the default value of 60k is used.</td>
</tr>
<tr>
<td></td>
<td>If your network requires a smaller size, specify it in this field. The specified value must be a valid VTAM RUSIZE that can be specified as M*2**E.</td>
</tr>
<tr>
<td></td>
<td>■ M—the mantissa; 8 to 15</td>
</tr>
<tr>
<td></td>
<td>■ E—the exponent; 5 to 12</td>
</tr>
<tr>
<td></td>
<td>The smallest RUSIZE possible is 256 (8<em>2**5) and the largest is 60k (15</em>2**12). If the default value is not used, all OPERTUNEs that communicate with each other must have the same VTAM RUSIZE.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER RUSIZE command (page 372) to change this value dynamically.</td>
</tr>
<tr>
<td>XCF group name</td>
<td>XCF group name (used to establish communications via the XCF coupling facility). See Chapter 10, “Sysplex considerations” for more information.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER XCF command (page 375) to change this value dynamically.</td>
</tr>
<tr>
<td>Sample frequency</td>
<td>The amount of time (in seconds) that the system waits between checks to see if a DB2 subsystem has been shut down or brought up and the frequency at which VTAM is checked when it is attempting to establish remote communications. Specify a numerical value in the range 1–99.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER SAMPFREQ command (page 372) to change this value dynamically.</td>
</tr>
<tr>
<td>Log buffer size</td>
<td>The number of messages to be kept in the online audit log returned by the HISTORY command. Each message uses 80 bytes. Specify a numerical value in the range 10–1000.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER BUFSIZE command (page 370) to change this value dynamically.</td>
</tr>
<tr>
<td>Write messages to syslog</td>
<td>Determines whether dialog commands and responses are written to the SYSLOG. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>■ Y—<em>(default)</em> Dialog commands and responses are written to the SYSLOG.</td>
</tr>
<tr>
<td></td>
<td>■ N—Dialog commands and responses are not written to the SYSLOG.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER SYSLOG command (page 373) to change this value dynamically.</td>
</tr>
</tbody>
</table>
### Table 5  System Profile panel fields (part 2 of 3)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use extended security</td>
<td>Determines whether extended security such as ACF2 or RACF will be used during processing of CANCEL THREAD, STOP, and FREE commands. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- Y—Use extended security. The extended security profile consists of the following components: opertuneID.sub.type.func.conn.auth.corr.plan</td>
</tr>
<tr>
<td></td>
<td>- opertuneID—the OPERTUNE subsystem ID</td>
</tr>
<tr>
<td></td>
<td>- sub—the DB2 subsystem</td>
</tr>
<tr>
<td></td>
<td>- type—the type of function being secured</td>
</tr>
<tr>
<td></td>
<td>- func—the function being secured</td>
</tr>
<tr>
<td></td>
<td>- conn—the connection ID</td>
</tr>
<tr>
<td></td>
<td>- auth—the authorization ID</td>
</tr>
<tr>
<td></td>
<td>- corr—the correlation ID</td>
</tr>
<tr>
<td></td>
<td>- plan—the plan name</td>
</tr>
<tr>
<td></td>
<td>- N—(default) Use standard security. The extended security profile consists of the following components: opertuneID.sub.type.func</td>
</tr>
<tr>
<td></td>
<td>- opertuneID—the OPERTUNE subsystem ID</td>
</tr>
<tr>
<td></td>
<td>- sub—the DB2 subsystem</td>
</tr>
<tr>
<td></td>
<td>- type—the type of function</td>
</tr>
<tr>
<td></td>
<td>- func—the function being secured</td>
</tr>
<tr>
<td>Validate unit name</td>
<td>Determines whether unit names are validated when a command changes a unit name. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- Y—Unit names are validated.</td>
</tr>
<tr>
<td></td>
<td>- N—Unit names are not validated. Specify this option if you use software that circumvents the system routine for checking valid unit names.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER UNITVAL command (page 374) to change this value dynamically.</td>
</tr>
<tr>
<td>Record initial values</td>
<td>Determines whether to record the initial values of all subsystem parameters in the audit log. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- Y—Record the initial values in the audit log.</td>
</tr>
<tr>
<td></td>
<td>- N—(default) Do not record the initial values in the audit log.</td>
</tr>
<tr>
<td></td>
<td>Use the ALTER RECINIT command (page 371) to change this value dynamically.</td>
</tr>
<tr>
<td>Call Data Collector</td>
<td>Determines whether the System and SQL Performance products Data Collector is notified when ZPARM values change. Specify one of the following values:</td>
</tr>
<tr>
<td></td>
<td>- Y—ZPARM changes will be reflected in the reports in the System and SQL Performance products.</td>
</tr>
<tr>
<td></td>
<td>- N—(default) Do not notify the System and SQL Performance products when ZPARM parameters change.</td>
</tr>
</tbody>
</table>
Creating system profiles

You can create a new profile by using two methods:

- create the new profile as described in “To create a system profile” on page 394
- create a new profile by copying an existing profile and editing the settings as described in “To copy a system profile” on page 397

System profile commands, subsystems, and VTAM APPLIDs

When you create a new system profile, you can add initial commands, subsystems, and VTAM APPLIDs to apply to the profile. These options are discussed in the following sections.

Initial commands

You can specify commands that the system profile will issue when OPERTUNE is started. You can specify any of the following types of commands:

- **FREEFORM**— OPERTUNE, MVS, or subsystem commands; specify the commands as described in “Free form commands” on page 305
- **element name**— specific elements command; specify the element parameters as described in Chapter 3, “OPERTUNE elements”
- **PROFILE**—a group or schedule; select the group or schedule profile from the list displayed on the Combination Profile Selection panel

---

**TIP**

To have OPERTUNE maintain a schedule of subsystem performance modifications, create a schedule profile using the instructions in Chapter 6, “Schedule profiles,” and execute the schedule profile at OPERTUNE startup.

---

**Subsystems and rules for control**

You can specify which subsystems an OPERTUNE will control by adding individual subsystems or groups of subsystems. When determining which subsystems an OPERTUNE system controls, OPERTUNE includes and excludes them in the order in which they appear in the list of subsystems.

For example, the profile for the OPERTUNE system named DDTM includes the following subsystem lists:

```
INCLUDE   DBH*
INCLUDE   DFA*
EXCLUDE   DFAA
```

all of the subsystems with a name starting with DBH will be under the control of DDTM, and all of the subsystems with a name starting with DFA except for DFAA will be under the control of DDTM.

As another example, the profile for the OPERTUNE system named DDTO includes the following subsystem lists:

```
INCLUDE   *
EXCLUDE   DFA*
EXCLUDE   DBY1
```

All subsystems except those whose name starts with DFA and subsystem DBY1 will be under the control of DDTO.

You can change the order of subsystems by using the Insert (I) command. For example, the following subsystems will be added in this order:

```
INCLUDE   DBH*
INCLUDE   DFA*
EXCLUDE   DFAA
```
If you add a subsystem using the ADD command, the subsystem is added to the end of the list. Adding DEB* using the ADD command results in the subsystems in this order:

```
INCLUDE   DBH*
INCLUDE   DFA*
EXCLUDE   DFAA
INCLUDE   DEB*
```

If you use the Insert command to add a subsystem, the subsystem will be inserted after the subsystem that you have used the Insert command on. For example, using the Insert command on DFA* to add the subsystem DEB* results in this order:

```
INCLUDE   DBH*
INCLUDE   DFA*
INCLUDE   DEB*
EXCLUDE   DFAA
```

**VTAM APPLIDs**

You can specify which VTAM APPLIDs are known to an OPERTUNE system by adding the VTAM connection specifications.

**To create a system profile**

You can create a new system profile by using the ISPF panels. The same panels are used if you are editing an existing system profile.

1. Type 8 on the Command line of the Main Selection Menu panel and press Enter.

2. Type 2 on the Command line of the Administrative/Utilities Menu panel and press Enter.

   The Profile Selection List panel is displayed.

3. Type **ADD profileName** on the Command line of the Profile Selection List panel and press Enter.

   The profile name must be the name of the OPERTUNE system for which you are creating a profile, with a limit of four characters. The System Profile panel, which lists the current values for the profile, is displayed.

4. Update the system profile fields by tabbing to the appropriate field and typing the new value.
For a description of the fields, see Table 5 on page 390. Before the changes take effect, you must exit the OPERTUNE CLIST and restart it. Use the UNDO command to negate the modifications you made without leaving the System Profile panel. The previous values are displayed.

5 To add initial commands, groups, or schedules that will be issued when OPERTUNE is started, perform the following steps:

A Type Y in the Display initial commands field on the System Profile panel and press Enter.

The System Profile Initial Commands panel is displayed. The panel shows the initial commands that have already been selected.

See “Initial commands” on page 392 for more information.

B Type ADD on the command line and press Enter.

The Add Element Selection panel is displayed. The panel shows the elements and profiles that already exist. The panel also shows the Freeform element for entering freeform commands.

C To add an element command, type S in the Act field next to the desired element and press Enter.

The Modify <element-name> panel is displayed, allowing you to select or modify the element. Modify the element and press Enter. Press End (F3) to return to the System Profile Initial Commands panel.

D To add a profile or schedule, select PROFILE and press Enter.

The Combination Profile Selection panel is displayed, allowing you to select and modify the profile. Select the profile by typing S in the Act field next to the profile and press Enter. Press F3 to return to the System Profile Initial Commands panel.

E To add a free-form command, select FREEFORM and press Enter.

The Free Form Command panel is displayed, allowing you to enter the freeform command to use. Select the type of command, type the command in the Command area on the panel, and press Enter. Press F3 to return to the System Profile Initial Commands panel.

F To remove a command or group or schedule profile, type D in the Act field next to the command or group or schedule profile, and press Enter.

G Press F3 to return to the System Profile panel.
H Press F3 to return to the Profile Selection List panel.

6 To specify which subsystems an OPERTUNE will control, perform the following steps:

A Type Y in the Display subsystem list field on the System Profile panel and press Enter.

The System Profile Subsystem Name List panel is displayed. All subsystems that are associated with the profile are listed. Asterisks (*) are used as wildcards.

See “Subsystems and rules for control” on page 393 for more information.

B Add a subsystem in one of the following ways:

- To add a subsystem specification to the end of the subsystem list, type ADD on the command line of the System Profile Subsystem Name List panel and press Enter.

- To insert a subsystem specification after another item in the subsystem list, type I in the Act column next to the subsystem you want this subsystem specification to follow on the System Profile Subsystem Name List panel and press Enter.

The Edit System Profile Subsystem Name panel is displayed.

C Type the name of the subsystem to add in the Subsystem name (pattern) panel. You can use wildcard characters (? for any character and * for any characters after the current position).

D Type 1 in the Include/Exclude field to include the subsystem. If you want to exclude the subsystem from being controlled by OPERTUNE, type 2.

E Press F3 to return to the System Profile Subsystem Name List panel. The subsystem that you added is listed.

F To edit a subsystem specification, type E in the Act field next to the subsystem and press Enter. You can change the specification in the Edit System Profile Subsystem Name panel that then appears.

G To delete a subsystem specification, type D in the Act field next to the subsystem and press Enter.

The specification is removed from the list.

H Press F3 to return to the System Profile panel.

I Press F3 to return to the Profile Selection List panel.
To specify which VTAM APPLIDs are known to an OPERTUNE system, perform the following steps:

A Type Y in the Display VTAM connections field on the System Profile panel and press Enter.

The System Profile VTAM APPLID List panel is displayed. You can add VTAM connections specifications on this panel.

B Type Add in the command line to add a VTAM APPLID, and press Enter.

The Edit System Profile Vtam Applid panel is displayed.

C Type the VTAM APPLID that you want to add in the VTAM Applid field.

D Type the OPERTUNE that will recognize the VTAM APPLID in the OPERTUNE using that applid field.

E Press F3 to return to the System Profile VTAM APPLID List panel.

F To edit a VTAM connection, type E in the Act field next to the VTAM connection and press Enter. The Edit System Profile VTAM Applid panel is displayed. You can change the APPLID or OPERTUNE system name from this panel.

G To remove a VTAM connection, type D in the Act field next to the VTAM connection and press Enter. The connection is removed from the list.

Press F3 to return to the System Profile panel.

Press F3 to return to the Profile Selection List panel.

Press F3 to return to the Administrative/Utilities Menu panel.

To copy a system profile

You can create a system profile by copying a current system profile into a new system profile that you are creating. You can then make any necessary changes to the new profile.

To copy a system profile, follow these steps:

1 Type 8 on the Command line of the Main Selection Menu panel and press Enter.

2 Type 2 on the Command line of the Administrative/Utilities Menu panel and press Enter.

The Profile Selection List panel is displayed.
3 Type **ADD profileName** on the **Command** line of the Profile Selection List panel and press **Enter**.

The profile name must be the name of the OPERTUNE system for which you are creating a profile, with a limit of four characters. The System Profile panel, which lists the current values for the profile, is displayed.

4 On the System Profile panel, type **COPY** on the **Command** line and press **Enter**.

The Profile Copy panel is displayed.

5 Type **S** in the **Act** field next to the profile you want to copy and press **Enter**.

OPERTUNE copies the selected profile into the one you were editing.

6 To copy a profile from another OPERTUNE, type its name in the **OPERTUNE to Copy from** field, and press **Enter**.

You can also type a question mark (?) in this field to display a list of OPERTUNEs from which to choose.

7 Update the system profile fields by tabbing to the appropriate field and typing the new value.

For a description of the fields, see Table 5 on page 390. Before the changes take effect, you must exit the OPERTUNE CLIST and restart it. Use the UNDO command to negate the modifications you made without leaving the System Profile panel. The previous values are displayed.

8 Add or change initial commands, subsystems or VTAM APPLIDs as detailed in Step 5 through Step 10 in the section “To create a system profile” on page 394.

**Editing, viewing or deleting system profiles**

You can edit, view or delete system profiles.

**To edit a system profile**

To edit a system profile, perform the following steps:

1 Type **8** on the **Command** line of the Main Selection Menu panel and press **Enter**.

2 Type **2** on the **Command** line of the Administrative/Utilities Menu panel and press **Enter**.
The Profile Selection List panel is displayed.

3 Type E in the Act field next to the desired system profile and press Enter.

4 Update the system profile fields by tabbing to the appropriate field and typing the new value.

Follow Steps 4 through Step 8 in the procedure “To create a system profile” on page 394 to modify subsystems, initial commands, or VTAM APPLIDs.

To view a system profile

To view a system profile, perform the following steps:

1 Type 8 on the Command line of the Main Selection Menu panel and press Enter.

2 Type 2 on the Command line of the Administrative/Utilities Menu panel and press Enter.

The Profile Selection List panel is displayed.

3 Type V in the Act field on the Profile Selection List panel and press Enter.

The System Profile panel is displayed.

4 To see the commands that are implemented automatically at initialization, type Y in the Display initial commands field, and press Enter.

5 To see a list of subsystems that are controlled by the OPERTUNE system, type Y in the Display subsystem list field, and press Enter.

6 To see a list of VTAM APPLIDs that are known to this OPERTUNE system, type Y in the Display VTAM connections field and press Enter.

To delete a system profile

To delete a system profile, perform the following steps:

1 Type 8 on the Command line of the Main Selection Menu panel and press Enter.

2 Type 2 on the Command line of the Administrative/Utilities Menu panel and press Enter.

The Profile Selection List panel is displayed.

3 Type D in the Act field next to the system profile and press Enter.
The Profile Delete Confirmation panel is displayed.

4 Type 1 and press Enter.

The system profile is deleted.

Security profiles

After you finish defining system profiles, you must define the security profiles required at your site. When the OPERTUNE profile data set is initialized during installation, a default security profile named DEFAULT is generated. This profile grants authorization to perform all OPERTUNE functions. If no user security profile is specified in a user’s profile, the DEFAULT profile is used.

From the Security Profile panel (Figure 236 on page 401) you can add use the following options:

- create a new profile and add authorizations to it (see “Creating a security profile” on page 401)

- copy an existing profile into the current profile (see “To create a profile by copying an existing profile” on page 402)

- delete an authorization from the current profile (see “Editing, viewing and deleting security profiles” on page 403)
Creating a security profile

You can create a security profile by either adding a profile and assigning authorizations to the profile, or by adding a profile and copying authorizations from an existing profile into the new profile.

To create a security profile

Perform the following steps to create a security profile:

1. Type 3 on the Command line on the Administrative/Utilities Menu panel.

   The Profile Selection List panel is displayed. This panel lists all security profiles that are defined for the current profile data set.

2. Type ADD profileName on the Command line of the Profile Selection List panel and press Enter.

   The Security Profile panel is displayed. This panel lists all authorizations that are defined for the current security profile.

3. Type ADD on the Command line of the Security panel and press Enter.
The Add Authorization Selection panel is displayed. This panel lists the current authorizations that are available for you to select for the security profile. The following fields are displayed on the Add Authorization Selection panel:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>The type of command to be authorized. Possible values are</td>
</tr>
<tr>
<td></td>
<td>• ALTER</td>
</tr>
<tr>
<td></td>
<td>• CUSTOM</td>
</tr>
<tr>
<td></td>
<td>• ELEMENT</td>
</tr>
<tr>
<td></td>
<td>• INFO</td>
</tr>
<tr>
<td></td>
<td>• MVS</td>
</tr>
<tr>
<td></td>
<td>• OPER</td>
</tr>
<tr>
<td></td>
<td>• SECURITY</td>
</tr>
<tr>
<td></td>
<td>• VTAM</td>
</tr>
<tr>
<td>Authorization</td>
<td>The specific subcommand to be authorized. Each component of a command can be authorized individually.</td>
</tr>
<tr>
<td>Description</td>
<td>Identifies the command that is authorized.</td>
</tr>
</tbody>
</table>

4 To limit the available authorizations listed to those for the target subsystem or subsystems, type Y in the Limit list to target(s) field and press Enter.

Only valid authorizations for DB2 subsystems are displayed.

To list all available authorizations, type N in the field. Valid authorizations for DB2 subsystems are displayed.

5 To add an authorization, type S in the Act field next to the desired authorization, and press Enter.

The authorization is removed from the Add Authorization Selection panel and is added to the Security Profile panel.

6 When you have selected all authorizations, press F3.

You are returned to the Security Profile panel.

7 (optional) To delete an authorization, type D in the Act field next to the authorization and press Enter.

The authorization is removed from the current profile.

8 Press F3 to exit the Security Profile panel.

To create a profile by copying an existing profile

You can create a security profile by copying an existing profile. Perform the following steps:
1 Type 3 on the Command line on the Administrative/Utilities Menu panel.

The Profile Selection List panel is displayed. This panel lists all security profiles that are defined for the current profile data set.

2 Type ADD profileName on the Command line of the Profile Selection List panel and press Enter.

The Security Profile panel is displayed. This panel lists all authorizations that are defined for the current security profile.

3 Type COPY on the Command line and press Enter.

The Profile Copy panel is displayed.

4 Type S in the Act field next to the profile you want to copy into the profile you are creating, and press Enter.

OPERTUNE copies the authorizations from the selected profile into the current profile that you are creating. The Security Profile panel is displayed.

5 To list profiles from another OPERTUNE, perform one of the following steps:

- If you do not know the OPERTUNE name, type a question mark (?) in the OPERTUNE to Copy from field, and press Enter. On the Copy Target OPERTUNE Selection panel, type S in the Act field next to the OPERTUNE that you want and press Enter.

  All profiles that are in the selected OPERTUNE are displayed on the Profile Copy panel.

- If you know the name of the OPERTUNE, type the name in the OPERTUNE to Copy from field, and press Enter.

  All profiles that are in the selected OPERTUNE are displayed on the Profile Copy panel.

6 After selecting a profile, press F3 to return to the Profile Selection List panel.

7 Press F3 to return to the Administrative/Utilities Menu panel.

### Editing, viewing and deleting security profiles

You can edit, view and delete existing security profiles.
**To edit a security profile**

1. Type 8 on the **Command** line of the Main Selection Menu panel and press **Enter**.

2. Type 3 on the **Command** line of the Administrative/Utilities Menu panel and press **Enter**.

   The Profile Selection List panel is displayed. This panel lists all security profiles that are defined for the current profile data set.

3. Type E in the **Act** field next to the Profile you want to edit, and press **Enter**.

   The Security Profile panel is displayed. This panel lists all authorizations that are defined for the current security profile.

4. Follow the instructions in steps 3 through 8 in the section “To create a security profile” on page 401 to change the authorizations and save your changes.

**To view a security profile**

1. From the Profile Selection List panel, type V in the **Act** field next to the profile and press **Enter**.

   The Security Profile panel is displayed. This panel lists all authorizations that are defined for the current security profile.

2. After viewing a profile, press **F3** to return to the Profile Selection List panel.

**To delete a security profile**

1. From the Profile Selection List panel, type D in the **Act** field next to the security profile and press **Enter**.

   The Profile Delete Confirmation panel is displayed.

2. Type 1 and press **Enter**.

   The security profile is deleted.
User profiles

User profiles define the authorizations available to individual users. The following types of user profiles are available:

- **individual**—the profile used for an individual user
- ***—the profile used if a user does not have a specific profile
- **DDTOPER**—the profile used for commands issued from the operator console

About user profiles

This section describes the types of profile entries that you can assign to a user and the different levels of profiles.

Types of profile entries

A user profile can contain the following types of entries, as shown in Figure 237:

- **a security profile**
  Security profiles determine the functions that can be performed. A security profile entry defines the default, basic security given to a user. OPERTUNE uses the authorizations in the specified security profile to determine access for the user. For more information about security profiles, see “Security profiles” on page 400.

- **a system profile**
  System profiles determine the OPERTUNE systems that can be accessed. A system profile entry limits a user’s access to the specified systems. When you specify a system, you can also associate a security profile to the system. In this way, you can limit a user to specific systems and to specific functions for those systems. You can specify one system profile entry to limit the user’s access to that one OPERTUNE system. If you want a user to have access to additional systems, you must include an entry for each system. For more information about system profiles, see “System profiles” on page 389.

- **a subsystem**
  A subsystem entry limits a user’s access to the specified DB2 subsystem. When you specify a subsystem, you can also associate a security profile to the subsystem. In this way, you can limit a user to specific subsystems and to specific functions for those subsystems. If you specify one subsystem entry within a specific OPERTUNE system the user can access only that subsystem. If you want a user to have access to additional subsystems, you must include an entry for each subsystem.
Profile names

Profile names can be for a specific user or they can use the * wildcard character to allow access to a group of users.

For example, a profile named ISJOHN would be used only for the user ID JOHN. A profile of IS* would be used for all user IDs that start with IS, such as ISJOHN, ISMARY, ISJOE, and ISJANE.

Special user profiles

OPERTUNE recognizes the following special user profiles:

- *
  If a user accesses OPERTUNE, but does not have a specific user profile, OPERTUNE uses the entries in the * user profile to grant authorization to that user. If you delete the * profile, then only users with a defined user profile can access OPERTUNE.

- DDTOPER
  The DDTOPER user profile specifies the security for commands issued from the operator console. If DDTOPER does not exist, OPERTUNE uses the * user profile. If neither DDTOPER nor * exists, only the MAINT command can be issued from the operator console.

Rules for determining authorizations

OPERTUNE uses rules for user profiles, OPERTUNE system and DB2 subsystems, and functions to determine authorizations for the user profile.
User profiles

The following rules (in the indicated order) determine which user profile to use:

1. OPERTUNE searches for a user profile that exactly matches the user ID, if one is found, it is used.

2. If an exact match is not found, any user profiles using the wildcard character are searched. If a match is found, it is used. For example, user profiles named IS*, ISJO*, and ISJ* are defined. The user ID is ISJOAN. The user profile ISJO* is used because it matches the most letters before encountering the wildcard character.

3. If no matching user profile is found, the * user profile is used.

4. If no * user profile exists, the user cannot access OPERTUNE.

OPERTUNE systems and DB2 subsystems

The following rules determine access to systems and subsystems:

1. If the user profile does not contain system profiles, all systems are accessible.

2. If the user profile contains system profile entries, only those systems are accessible.

3. If a system profile does not contain subsystem entries, all subsystems are accessible.

4. If a system profile contains subsystem entries, only those subsystems are accessible within the system.

Functions

The following rules determine the OPERTUNE functions that are allowed:

1. If a security profile is associated with a subsystem, system profile, or user profile, the security profile is used.

2. If a security profile is not associated with a subsystem, system profile, or user profile, the DEFAULT security profile is used.

3. If no DEFAULT security profile is defined, the user cannot use any of the OPERTUNE functions.
**Example**

Assume that the user JOHN has the user profile shown in Figure 238. The INFO security profile has information authorization only; the FULL security profile has access to all OPERTUNE features; and the PARTIAL security profile has access to some element commands.

*Figure 238 Sample User Profile*

If JOHN tries to access OPERTUNE system DDTC, access is denied because other systems are specifically defined.

If JOHN accesses DB2A under DDTA, JOHN has FULL access. If JOHN accesses DBSA under DDTA, JOHN has PARTIAL access. For all other subsystems under DDTA, JOHN does not have access.

For all subsystems under the control of DDTB, JOHN has PARTIAL access.
User profile panel

Select the User profiles option from the Administration/Utilities Menu to display the Profile Selection List panel. Adding or editing a profile displays the User Profile panel (Figure 239), which lists all of the authorizations and security that is associated with the user profile.

Figure 239  User Profile panel

The following fields are displayed on the User Profile panel:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile name</td>
<td>The name of the user profile that is being edited.</td>
</tr>
<tr>
<td>Description</td>
<td>The description of the profile that is being edited.</td>
</tr>
<tr>
<td>User security profile</td>
<td>The name of the user security profile to use with this profile. This value is overridden by any security profiles specified for specific OPERTUNEes and subsystems in the user’s access list. If no value is specified, the DEFAULT security profile is used (see “Rules for determining authorizations” for more details).</td>
</tr>
</tbody>
</table>
Creating a user profile

You can create a user profile by either adding a profile and assigning authorizations to the profile, or by adding a profile and copying authorizations from an existing profile into the new profile.

To create a user profile

Perform the following steps to create a user profile:

1. Type 1 on the Command line on the Administrative/Utilities Menu panel.

   The Profile Selection List panel is displayed. This panel lists all user profiles that are defined for the current profile data set.

2. Type ADD profileName on the Command line of the Profile Selection List panel and press Enter.

   The User Profile panel (Figure 239 on page 409) is displayed. This panel lists the systems and security profiles that are defined for the current user profile.

3. To add an OPERTUNE system that this user profile can access, type ADD on the Command line of the User panel and press Enter.
The Profile Selection panel is displayed. This panel lists all OPERTUNE system profiles that are currently available and not yet defined to the user profile.

4 Type S in the Act field next to the desired profile, and press Enter.

The User System Authorization panel (Figure 240) is displayed. The OPERTUNE systems and their profiles that are defined to the user profile are listed. The selected OPERTUNE is displayed in the OPERTUNE system field.

Figure 240 User System Authorization panel

5 To specify a security profile for the OPERTUNE and all of the DB2 systems that it controls, type the profile into the OPERTUNE Security field, or type ? to display a list of security profiles from which to choose.

See “Rules for determining authorizations” for information on how security profiles in a user profile relate to each other.

6 To add a subsystem, type ADD on the Command line, and press Enter.

- To delete a subsystem, type D in the Act field next to the subsystem and press Enter.

- To edit a subsystem profile, type E in the Act field next to the profile and press Enter.

The User Subsystem Authorization panel (Figure 241 on page 412) is displayed. Use the User Subsystem Authorization panel to specify a subsystem and optionally associate a security profile with the subsystem for an OPERTUNE system.
7 To specify a DB2 subsystem, type its name in the Subsystem name field.

8 (optional) Type the security profile in the Security profile field to specify a security profile to be associated with that DB2.

You can also type a question mark (?) in the Security profile field to display a list of security profiles from which to choose.

9 Press F3 to return to the User System Authorization Panel.

To create a new profile by copying an existing profile

1 Type 1 on the Command line on the Administrative/Utilities Menu panel.

   The Profile Selection List panel is displayed. This panel lists all user profiles that are defined for the current profile data set.

2 Type ADD profileName on the Command line of the Profile Selection List panel and press Enter.

   The User Profile panel (Figure 239 on page 409) is displayed. This panel lists the systems and security profiles that are defined for the current user profile.

3 To copy an existing profile into a new profile, type COPY on the Command line of the User Profile panel, and press Enter.
The Profile Copy panel (Figure 242) is displayed.

**Figure 242  Profile Copy panel**

![Profile Copy panel](image)

4 Select the profile to copy from with the S action code. and press Enter.

OPERTUNE copies the selected profile into the one you were editing.

To copy a profile from another OPERTUNE, type its name in the **OPERTUNE to Copy from** field, and press Enter, or type a question mark (?) in this field to display a list of OPERTUNEs from which to choose.

5 Edit the information as necessary.

**Editing, viewing and deleting user profiles**

You can edit, view, or delete existing user profiles.

**To edit a user profile**

1 Type 1 on the **Command** line on the Administrative/Utilities Menu panel and press Enter.

The Profile Selection List panel is displayed. This panel lists all user profiles that are defined for the current profile data set.

2 Type E in the **Act** field next to the profile you want to edit, and press Enter.

The Profile Selection List panel is displayed. This panel lists all user profiles that are defined for the current profile data set.
3 Follow the instructions in steps 3 through 9 in the section “To create a user profile” on page 410 to change the authorizations and save your changes.

**To view a user profile**

1 Type 1 on the Command line on the Administrative/Utilities Menu panel and press Enter.

   The Profile Selection List panel is displayed. This panel lists all user profiles that are defined for the current profile data set.

2 Type V in the Act field next to the user profile you want to view, and press Enter.

3 The User Profile panel is displayed.

4 Type L in the Act field next to the systems that you want to view, and press Enter.

5 The User System Authorization panel is displayed.

6 Press F3 to return to the User Profile panel

7 Press F3 to return to the Profile selection list panel.

**To delete a user profile**

1 Type 1 on the Command line on the Administrative/Utilities Menu panel.

   The Profile Selection List panel is displayed. This panel lists all user profiles that are defined for the current profile data set.

2 Type D in the Act field next to the user profile you want to delete, and press Enter.

   The Profile Deletion Confirmation panel is displayed.

3 Type 1 and press Enter to delete the user profile.
Profile enqueue maintenance

When you try to add a new profile or select an existing profile for modification or deletion, an enqueue is issued. This enqueue ensures that multiple users do not try to update the same profile simultaneously. The enqueue is released when the addition, modification, or deletion is complete. If a user is canceled from the OPERTUNE dialogs while holding an enqueue (for example, a user ID is canceled), that enqueue is not released.

Select the Profile enqueue maintenance option from the Administrative/Utilities Menu to display the Profile Enqueue Maintenance panel (Figure 243). You can use this panel, which lists both valid and invalid enqueues, to release profiles with an outstanding enqueue that is no longer valid. You must determine which enqueues are valid or invalid.

**NOTE**

Your user profile must have the proper authorization before you are permitted access to this panel. To remove an enqueue against a group profile, you need CUSTGRP authorization, to remove one against a schedule profile, you need CUSTSCH authorization, and so on.

**Figure 243  Profile Enqueue Maintenance panel**

To remove an enqueue, type \( S \) in the Act field next to the enqueue and press Enter. If a valid enqueued request has been selected, the update request of the user updating the associated profile will be rejected. The Profile Enqueue Maintenance panel displays the following information for each profile:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>the profile type (user, system, security, group, or schedule)</td>
</tr>
<tr>
<td>Name</td>
<td>the actual profile name</td>
</tr>
<tr>
<td>Holder</td>
<td>the user ID of the person holding the profile</td>
</tr>
</tbody>
</table>
Implementing the interface between OPERTUNE and RACF or ACF2

You can restrict user access to the OPERTUNE features on a functional basis by defining RACF or ACF2 security at any or all of the following levels:

- **OPERTUNE System**
  An OPERTUNE can control one or more subsystems on an MVS system. Restricting the use of an OPERTUNE prevents anyone from using that OPERTUNE to make changes to a subsystem, unless they have been granted specific access to that OPERTUNE.

- **Subsystem**
  Restricting a subsystem prevents anyone from using OPERTUNE to change that subsystem, unless they have been granted specific access to that subsystem.

- **Function Type**
  The OPERTUNE features are divided into the functional types shown in Table 6 on page 422; you can restrict access to any or all of the OPERTUNE functions based on function type.

- **Function**
  The OPERTUNE functional types are comprised of functions, as shown in 422; you can restrict access to any or all of the OPERTUNE functions on the basis of individual function.

**NOTE**
For the security user exit to work without modifications, SAF must be enabled on your system.

Using RACF security

You can establish RACF security by:

- securing the OPERTUNE data sets (DDTPROFS and ISPTABL)
- defining resource profiles for the OPERTUNE functions
- both securing the OPERTUNE data sets (DDTPROFS and ISPTABL) and defining the resource profiles for the OPERTUNE functions
If the profile data set is secured, UPDATE authorization can be granted to anyone updating a profile. In addition, the OPERTUNE started task must be assigned a user ID with UPDATE authorization. This is accomplished by updating member ICHRIN03 in SYS1.LPALIB, which might require an IPL of your system.

If you are defining resource profiles, you must perform the following steps for RACF and the OPERTUNE security exit:

1. Define a RACF CLASS for the OPERTUNE profiles ($DDT is the default). If this does not conform to your standards for RACF classes and you want to specify a different class, you must make a corresponding change to the OPERTUNE security exit, DDT0XT1 (see “OPERTUNE security exit” on page 418).

2. Define RACF resource profiles with the appropriate UACC, and PERMIT users and/or groups to have READ authorization for specific OPERTUNE resources. For example, the resource profiles are in the following format:

   oprx.sub.ftype.func

   - oprx is the OPERTUNE system ID
   - sub is the SSID (subsystem ID)
   - ftype is the function type (see Table 6 on page 422)
   - func is the function (see Table 6 on page 422)

Example 1

Restrict the use of an OPERTUNE system, OPRX. Define

OPRX*  UACC(NONE)

Specify a universal access of none, then permit only specific users and/or groups to have READ authorization.

Example 2

Restrict all changes to the production DB2P subsystem, but allow anyone to query it. Restrict all changes to the test DB2T subsystem, but allow anyone to query and cancel threads. Define

OPRX.DBD2P*  UACC(NONE)
OPRX.DBD2T*  UACC(NONE)
Implementing the interface between OPERTUNE and RACF or ACF2

OPRX.*.INFO.QUERY UACC(READ)
OPRX.DB2T.OPER.CANCEL UACC(READ)

Then permit only specific users or groups to have additional READ authorization.

**Example 3**

Restrict who can add, modify, or delete OPERTUNE profiles. Define

OPRX.CUSTOM.* UACC(NONE)

Then permit only specific users or groups to have READ authorization.

**OPERTUNE security exit**

Perform these steps:

1  Review the OPERTUNE security exit, DDT0XT1, contained in the OPERTUNE SAMP library. This exit is invoked by the OPERTUNE started task and issues a RACROUTE macro to determine whether a request should be approved. If no RACF resource profile is found, the exit issues a return code of 8 to OPERTUNE, which indicates that OPERTUNE was unable to determine whether authorization is granted and the OPERTUNE profiles should be used to determine whether the request is to be approved.

2  If you intend to use RACF security only, without the OPERTUNE profiles as a secondary check, you should set a return code of 4, which indicates that OPERTUNE profiles will never be used. To accomplish this, perform either of the following steps:

   - Modify the exit and change the following line:

     
     ```
     &DFLTRC SET 8 *RC4* to &DFLTRC SET 4 *RC4*
     ```

   - Modify the assemble and link-edit JCL provided in member DDTSECUR in the OPERTUNE CNTL library, and add the following parameter to the assembler PARM statement:

     SYSPARM(RC4)

3  If the suggested RACF class $DDT was changed, make the corresponding change in the OPERTUNE security exit, DDT0XT1, as follows:

   ```
   DDTCLASS DC C'$DDT' to DDTCLASS DC C'xxxx'
   ```

   `xxxx` is your 1- to 8-character RACF CLASS identifier for OPERTUNE.
The user ID associated with the use of the master console is also defined in the OPERTUNE security exit. The suggested ID is DDTOPER. If this does not conform to your standards for RACF IDs, and you wish to specify a different ID, a corresponding change must be made to the OPERTUNE security exit, DDT0XT1, as follows:

```
OPERID DC C’DDTOPER’ to OPERID DC C’xxxxxxxxx’
```

`xxxxxxxxx` is the ID you have selected.

**NOTE**

The length of the specified ID must be eight characters. If the ID is less than eight characters, it must be padded with blanks.

Assemble and link-edit DDT0XT1 into the OPERTUNE LOAD library. Use the JCL provided in member DDTSECUR, which can be found in the OPERTUNE CNTL library. Then start or cycle the OPERTUNE started task.

### Using ACF2 security

You can use ACF2 security by:

- securing the OPERTUNE data sets (DDTPROFS and ISPTABL)
- defining resource profiles for the OPERTUNE functions
- both securing the OPERTUNE data sets (DDTPROFS and ISPTABL) and defining the resource profiles for the OPERTUNE functions

**NOTE**

You will need write access for the DDTPROFS and ISPTABL data sets.

If the profile data set is secured, ALLOW authorization must be granted to any one updating a profile. In addition, the OPERTUNE started task must be assigned a unique logon ID with ALLOW authorization, specifying the STC option.

If rules must be defined, your ACF2 administrator should perform the following steps.

### ACF2 environment

Follow these steps:
1 Ensure that System authorization Facility (SAF) is enabled on your system. The OPERTUNE started task invokes a security exit, DDT0XT1, which issues a RACROUTE macro to determine whether a request should be approved. If SAF is not enabled, the RACROUTE request is not honored and you must code your own version of the exit to extract the authorization information from ACF2.

2 Set up the environment for option changes by issuing the following command:

   SET CONTROL(GS0)

3 Define a SAF call record.

   In the following specification, $DDT is used for class. If this does not conform to your site standards, BMC Software recommends that you use a unique name for the OPERTUNE class.

   INSERT SAFDEF.abc ID(nnnnnnnn) MODE(GLOBAL)-RACROUTE
       (REQUEST=AUTH,CLASS=$DDT) RB(-) PROGRAM(-)

   ■ abc—the three-digit RSRCTYPE code from the CLASMAP definition
   ■ nnnnnnnn—the unique ID for this record
   ■ $DDT—the class for OPERTUNE actions and resources

4 Define a CA-ACF2 type and class.

   INSERT CLASMAP.nnn RSRCTYPE(abc) RESOURCE($DDT)

   ■ nnn—a unique identifier for this CLASMAP
   ■ abc—the three-digit TYPE code of the resource
   ■ $DDT—the class for OPERTUNE actions and resources

5 Update the INFODIR record.

   CHANGE INFODIR TYPES(R-Rabc)

   abc is the three-digit RSRCTYPE code from the CLASMAP definition.

6 Refresh the GSO records.

   Follow your in-house procedures for refreshing SAFDEF and CLASMAP definitions. If you are masking the resource rule, you will also need to perform a rebuild of the rule set directory.

   For information on CA-ACF2, refer to CA-ACF2 General Information Guide MVS which contains a list of all CA-ACF2 documents.
OPERTUNE security exit

To install the OPERTUNE security exit with ACF security, perform these steps:

1. Review the OPERTUNE security exit, DDT0XT1, contained in the OPERTUNE SAMP library. This exit is invoked by the OPERTUNE started task and issues a RACROUTE macro to determine whether a request should be approved. If no ACF2 rule is found for the resource, the exit issues a return code of 8 to OPERTUNE, which indicates that OPERTUNE profiles should be used to determine whether the request is to be approved.

2. If you intend to use only ACF2 security (no OPERTUNE security), you should disallow a return code of 8, which indicates that OPERTUNE profiles will never be used. To accomplish this, perform either of the following steps:
   - Modify the exit and change the following

   ```
   &DFLTRC SET 8 "RC4" to &DFLTRC SET 4 "RC4"
   ```

   - Modify the assemble and link-edit JCL provided in member DDTSECUR in the OPERTUNE CNTL library, and add the following parameter to the assembler PARM statement:

     ```
     SYSPARM(RC4)
     ```

3. If the suggested ACF2 class $DDT was changed, make the corresponding change in the OPERTUNE security exit, DDT0XT1, as follows:

   ```
   DDTCLASS DC 'C'$DDT' to DDTCLASS DC 'xxxx'
   ```

   `xxxx` is the 1- to 8-character ACF2 CLASS identifier for OPERTUNE

4. The user ID associated with the use of the master console is also defined in the OPERTUNE security exit. The suggested ID is DDTOPER. If this does not conform to your standards for ACF2 IDs and you want to specify a different ID, you must make a corresponding change to the OPERTUNE security exit, DDT0XT1, as follows:

   ```
   OPERID DC 'C'DDTOPER ' to OPERID DC 'C'xxxxxxx'
   ```

   `xxxxxxxx` is the ID you have selected

---

**NOTE**

The length of the ID specified must be eight characters. If the ID chosen is less than eight characters, it must be padded with blanks.
Assemble and link-edit DDT0XT1 into the OPERTUNE LOAD library. Use the JCL provided in member DDTSECUR, which can be found in the OPERTUNE CNTL library. Then start or cycle the OPERTUNE started task.

Securing OPERTUNE by function

Table 6 divides OPERTUNE functions into logical categories. The categories are divided into function type, function, and security profile. The following values are used to define each security profile:

A—system ID (your OPERTUNE SSID)
B—subsystem (your DB2 subsystem)
C—function type
D—function
E—connection ID (extended security only)
F—authorization ID (extended security only)
G—correlation ID (extended security only)
H—plan name (extended security only)
I—catalog name (extended security only)
J—data base name (extended security only)
K—table space name (extended security only)

NOTE
You can replace any value in the security profile with *.

Table 6  OPERTUNE security summary (part 1 of 7)

<table>
<thead>
<tr>
<th>OPERTUNE Actions</th>
<th>Function Type</th>
<th>Function</th>
<th>Security Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZPARMs (SET, RESET)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ABEXP</td>
<td>Element</td>
<td>ABEXP</td>
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<td>ABIND</td>
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<tr>
<td>ACCESS</td>
<td>Security</td>
<td>ACCESS</td>
<td>A.B.C.D.</td>
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<td>A.B.C.D.</td>
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<td>Element</td>
<td>ACCUMUID</td>
<td>A.B.C.D.</td>
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<td>ARC2FRST</td>
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<td>ARCBLKSZ</td>
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<td>ARCBLKSZ</td>
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<td>ARCCOMP</td>
<td>Element</td>
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### Table 6  OPERTUNE security summary (part 2 of 7)

<table>
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<tr>
<th>OPERTUNE Actions</th>
<th>Function Type</th>
<th>Function</th>
<th>Security Profile</th>
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<tbody>
<tr>
<td>ARCHIVE</td>
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<td>ARCPREF</td>
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<td>ARCPROT</td>
<td>A.B.C.D</td>
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<td>ARCRETN</td>
<td>A.B.C.D</td>
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<td>CDSSRDEF</td>
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<td>CHKPFRQ</td>
<td>Element</td>
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<td>A.B.C.D</td>
</tr>
<tr>
<td>COMAXPAG</td>
<td>Element</td>
<td>COMAXPAG</td>
<td>A.B.C.D</td>
</tr>
<tr>
<td>CONSTTOR</td>
<td>Element</td>
<td>CONSTTOR</td>
<td>A.B.C.D</td>
</tr>
<tr>
<td>COORDNTR</td>
<td>Element</td>
<td>COORDNTR</td>
<td>A.B.C.D</td>
</tr>
<tr>
<td>CORVRSTH</td>
<td>Element</td>
<td>CORVRSTH</td>
<td>A.B.C.D</td>
</tr>
<tr>
<td>COTIMINT</td>
<td>Element</td>
<td>COTIMINT</td>
<td>A.B.C.D</td>
</tr>
<tr>
<td>DBACRVW</td>
<td>Element</td>
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<td>DBPROTCL</td>
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<td>DDFINTV</td>
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<td>DDFCQTM</td>
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### Table 6  OPERTUNE security summary (part 3 of 7)

<table>
<thead>
<tr>
<th>OPERTUNE Actions</th>
<th>Function Type</th>
<th>Function</th>
<th>Security Profile</th>
</tr>
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<tr>
<td>EDMDSPAC</td>
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**Facilities available via console commands only**

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</tr>
<tr>
<td></td>
<td>CONNECT</td>
<td>A.C.D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DELREMOT</td>
<td>A.C.D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DISCONN</td>
<td>A.C.D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEND</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STATUS</td>
<td>A.C.D</td>
<td></td>
</tr>
<tr>
<td>Info</td>
<td>DISPLAY</td>
<td>A.C.D</td>
<td></td>
</tr>
<tr>
<td>MVS</td>
<td>SHUTDOWN</td>
<td>A.C.D</td>
<td></td>
</tr>
</tbody>
</table>
VTAM support

This chapter presents the following topics:

- OPERTUNE network structure and flow .................................................. 429
  - Establishing the OPERTUNE network .................................................. 430
  - Defining an OPERTUNE system to VTAM .............................................. 431
- Cross-domain VTAM sessions ................................................................. 432
  - Steps for MVSA ................................................................................... 432
  - Steps for MVSB .................................................................................. 433
- VTAM commands .................................................................................... 434
  - ADDREMOTE command ................................................................. 434
  - CONNECT command ........................................................................ 435
  - DELREMOTE command ............................................................... 435
  - DISCONNECT command ............................................................... 436
  - SEND command .............................................................................. 436
  - STATUS command ........................................................................... 437

OPERTUNE network structure and flow

VTAM is used to establish communication between different OPERTUNE systems on the same MVS system or across multiple MVS systems. Using VTAM allows a host OPERTUNE to modify or tune a remote subsystem not under its direct control.

Figure 244 on page 430 illustrates communication between different OPERTUNEs using VTAM.
Before an OPERTUNE system can communicate with other OPERTUNE systems, it must have an APPLID defined in its system profile. If an APPLID is specified but not yet activated, the starting OPERTUNE periodically tries to establish communications with the newly activated APPLID. The system profiles of all OPERTUNE communicating with each other should be stored in the same profile data set (see “System profiles” on page 389). For two OPERTUNE systems to communicate using different profile data sets, each profile data set must include system profiles for both OPERTUNE systems.

NOTE
If a remote OPERTUNE is defined in the system profile as a remote VTAM connection, you cannot connect to that OPERTUNE via XCF. To make this connection, the VTAM definition for the remote OPERTUNE would have to be omitted from the system profile, or removed via the DELREMOTE command. You can then connect the remote OPERTUNE via the ALTER XCF command.

Establishing the OPERTUNE network

If the OPERTUNE that you are trying to establish connections with is up and has an active APPLID defined in its system profile, two sessions are established as shown in Figure 245:

- sender session—used to send requests to the remote OPERTUNE and receive the responses
- receiver session—used to receive remote requests and send results back
Defining an OPERTUNE system to VTAM

To define an OPERTUNE system as part of the OPERTUNE network, prepare the system for VTAM communications as follows:

1. Specify the VTAM APPLID in the OPERTUNE system profile (see “VTAM APPLIDs” on page 394).

2. Define the APPLID in a VTAMLST data set member as shown below for APPLA and APPLB. The member name cannot be the same as the VTAM APPLID name.

   ```
   APPLOPTN VBUILD TYPE=APPL
   APPLA APPL SONSCIP=NO,PARSESS=YES,
   EAS=(10),ACBNAME=APPLA
   APPLB APPL SONSCIP=NO,PARSESS=YES,
   EAS=(10),ACBNAME=APPLB
   ```

3. Activate the APPLID as follows:

   ```
   V NET,ID=xxxxxxxx,ACT
   ```

   `xxxxxxxx` is the name of the VTAMLST data set member containing the APPLID definition.
Cross-domain VTAM sessions

For a host OPERTUNE on one MVS system to communicate with a remote target OPERTUNE on a different MVS system, you must define the remote VTAM APPLID as a cross-domain resource. The following steps are involved in setting up cross-domain communication, such as the one shown in Figure 247.

Figure 247  Cross-domain VTAM sessions

Steps for MVSA

For MVSA, follow these steps:

1. Specify the VTAM APPLID APPLA in the system profile of OPERTUNE OPTA.

2. Define the APPLID APPLA in a VTAMLST data set member as follows (the member name cannot be the same as the VTAM APPLID name):

   APPLID=APPLA
   SONSCIP=NO,PARSESS=YES,
   EAS=(10),ACBNAME=APPLA

3. Activate the APPLA as follows:

   V NET,ID=xxxxxxxx,ACT

   xxxxxxxxxx is the name of the VTAMLST data set member containing the APPLA definition.
4 Add a cross-domain resource member CDRSA in your VTAMLST data set to define the remote APPLB as follows (The member name cannot be the same as the label on the VBUILD statement):

<table>
<thead>
<tr>
<th>CDRS1</th>
<th>VBUILD</th>
<th>TYPE=CDRSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLB</td>
<td>CDRSC</td>
<td>CDRM=D2</td>
</tr>
</tbody>
</table>

5 Activate CDRS1 in MVSA, using the VARY command as follows:

V NET,ID=CDRSA,ACT

**Steps for MVSB**

For MVSB, follow these steps:

1 Specify the VTAM APPLID APPLB in the system profile of OPERTUNE OPTB.

2 Define the APPLID APPLB in a VTAMLST data set member as follows (the member name cannot be the same as the VTAM APPLID name):

<table>
<thead>
<tr>
<th>APPLopertuneID</th>
<th>VBUILD</th>
<th>TYPE=APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLB</td>
<td>APPL</td>
<td>SONSCIP=NO,PARSESS=YES, EAS=(10),ACBNAME=APPLB</td>
</tr>
</tbody>
</table>

3 Activate the APPLB as follows:

V NET,ID=xxxxxxxx,ACT

`xxxxxxxx` is the name of the VTAMLST data set member containing the APPLB definition

4 Add a cross-domain resource member CDRSB in your VTAMLST data set to define the remote APPLA as follows (The member name cannot be the same as the label on the VBUILD statement):

<table>
<thead>
<tr>
<th>CDRS2</th>
<th>VBUILD</th>
<th>TYPE=CDRSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLA</td>
<td>CDRSC</td>
<td>CDRM=D1</td>
</tr>
</tbody>
</table>

5 Activate CDRS2 in MVSB, using the VARY command as follows:

V NET,ID=CDRSB,ACT
VTAM commands

OPERTUNE offers commands to control the VTAM sessions in the OPERTUNE network. These commands must be entered from the console using the MODIFY command as follows:

```
F opertuneID,command
```

- `opertuneID` is the OPERTUNE system name system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if it is running as a batch job)
- `command` is the VTAM command

ADDREMOTE command

Use the ADDREMOTE command to define a new remote OPERTUNE for communication with a local OPERTUNE and attempt to establish VTAM sessions between them.

Command syntax and parameters

```
ADDREMOTE (applID, systemName)
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>applID</td>
<td>The VTAM application ID of the new remote OPERTUNE system.</td>
</tr>
<tr>
<td>systemName</td>
<td>The name of the new remote OPERTUNE system.</td>
</tr>
</tbody>
</table>

To add a remote OPERTUNE, follow these steps:

1. Verify that the system profile for the new remote OPERTUNE exists in the local and remote profile data sets.

2. Verify that the remote OPERTUNE has a valid VTAM APPL defined in its system profile and that cross-domain resources linking the local and remote systems have been defined.

3. Verify that the VTAM APPL of the remote OPERTUNE and the cross-domain resources have been varied active.

4. Issue the ADDREMOTE command as described above.
Specify the remote system as the target and specify the APPLID of the remote system. For more information about specifying targets, see “Selecting a target OPERTUNE and subsystem” on page 44.

**CONNECT command**

Use the CONNECT command to establish VTAM sessions between one OPERTUNE and one or multiple remote OPERTUNEs eligible for communication.

**Command syntax and parameters**

```
CONNECT ALL
    (applID)
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>applID</td>
<td>The VTAM application ID of the OPERTUNE system or systems to which you want to connect. More than one APPLID requires a comma separator.</td>
</tr>
<tr>
<td>ALL</td>
<td>Connections are established with all available OPERTUNE systems.</td>
</tr>
</tbody>
</table>

**DELREMOTE command**

Use the DELREMOTE command to disconnect and void any subsequent connection attempts between one OPERTUNE and one or multiple remote OPERTUNEs. This action allows you to selectively isolate an OPERTUNE from communication with other OPERTUNEs.

**Command syntax and parameters**

```
DELREMOTE ALL
    (applID)
```
**DISCONNECT command**

Use the DISCONNECT command to discontinue VTAM sessions between one OPERTUNE and one or multiple remote OPERTUNEs.

**Command syntax and parameters**

```
DISCONNECT ALL applID
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>applID</td>
<td>The VTAM application ID of the OPERTUNE system or systems from which you want to sever current connections and prevent subsequent connections. More than one APPLID requires a comma separator.</td>
</tr>
<tr>
<td>ALL</td>
<td>Connections are severed with all available OPERTUNE systems and subsequent attempts to connect will fail.</td>
</tr>
</tbody>
</table>

**SEND command**

Use the SEND command to route commands from a local OPERTUNE to a remote OPERTUNE.

**Command syntax and parameters**

```
SEND applID command
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>applID</td>
<td>The VTAM application ID of the OPERTUNE system or systems from which you want to disconnect permanently. Once disconnected, the VTAM APPLID cannot be added back. More than one APPLID requires a comma separator.</td>
</tr>
<tr>
<td>ALL</td>
<td>Sessions with all available OPERTUNE systems are disconnected.</td>
</tr>
</tbody>
</table>
STATUS command

Use the STATUS command to display the status of potential connections that an OPERTUNE has, regardless of whether the VTAM sessions have been established.

Command syntax and parameters

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>applID</td>
<td>VTAM application ID of the remote OPERTUNE system that processes the command. More than one APPLID requires a comma separator.</td>
</tr>
<tr>
<td>command</td>
<td>The command syntax of the command to be sent. Specify any valid OPERTUNE command except the SEND command.</td>
</tr>
<tr>
<td>ALL none</td>
<td>The status of all connections is displayed. If no parameter is specified, the status of all connections is displayed.</td>
</tr>
</tbody>
</table>
Sysplex considerations

This chapter presents the following topics:

OPERTUNE in the sysplex environment ............................................ 439
OPERTUNE with DB2 in a sysplex environment .................................. 441
  Freeing a table space across a data sharing group .......................... 441
  Dynamically tuning a data sharing group .................................. 442
  Data sharing considerations .................................................. 443

OPERTUNE in the sysplex environment

Figure 248 on page 440 demonstrates the advantage of running OPERTUNE in a sysplex environment.

- You do not need to know which OPERTUNE controls the subsystem you want to modify. Each OPERTUNE shows all of the available subsystems in the XCF group.
- You can manage a larger group of subsystems from a central point.
- You can treat a DB2 data sharing group as a single subsystem.
- If a remote OPERTUNE is defined in the system profile as a remote VTAM connection, you cannot connect to that OPERTUNE via XCF. To make this connection, the VTAM definition for the remote OPERTUNE would have to be omitted from the system profile, or removed via the DELREMOTE command. You can then connect the remote OPERTUNE via the ALTER XCF command.
In a VTAM environment, every OPERTUNE is independent, but communicates with the others. To change an element in DBA1, the TSO user connected to DDTB must change the target OPERTUNE to DDTA (assuming he knows that DDTA controls DBA1), change the target subsystem, then change the element.

In a sysplex environment, the OPERTUNE network is seamlessly integrated. Any TSO user, connected to any OPERTUNE in the XCF group, sees the same list of subsystems and can update them without changing the target OPERTUNE.
OPERTUNE with DB2 in a sysplex environment

OPERTUNE provides additional benefits to DB2 data sharing users:

- You can free a table space across the entire data sharing group.
- You can dynamically tune the entire data sharing group.

Freeing a table space across a data sharing group

In a data sharing group, multiple DB2s on multiple MVS systems can connect to the same table space. As Figure 249 shows, with OPERTUNE in a sysplex environment, a single FREE command can terminate all connections to the table space throughout the data sharing group.

Figure 249  Freeing a table space in a data sharing environment

With a stand-alone or VTAM-connected OPERTUNE, freeing the shared table space will remove only the connections on one MVS. This leaves subsystems from two MVS systems still connected to the table space.

With OPERTUNE systems running on each MVS image and connected in an XCF group, a single FREE command can completely free the table space throughout the data sharing group. The connections from all three MVS systems are freed.
Dynamically tuning a data sharing group

One of the main reasons for using DB2 data sharing is improving performance. Because OPERTUNE allows you to dynamically tune all subsystems in a data sharing group, you can further improve the performance of the entire sysplex without incurring additional costs.

Examples

The following two examples illustrate how you can improve performance.

Example 1

The castout owner of a data set is the subsystem that performs the first write to that data set. Depending on when systems and applications are started, a non-optimal situation could exist for writing the shared data sets to DASD. With OPERTUNE, you could change the castout owners of the data sets to either balance the load across the sysplex, or to put a majority of the I/O load onto a single, slower machine.

Availability of data in an organization is critical. If one subsystem in the sysplex is down, the others automatically handle the increased work load. However, the remaining systems may not be able to handle the entire workload. Using OPERTUNE, you could tune the remaining subsystems to better handle the increased workload, without an outage on the subsystems. By improving performance of these subsystems, you make key data more available to users.

Example 2

In the previous situation, if one subsystem shuts down, you could use OPERTUNE to adjust buffer pool sizes and thresholds, reduce the checkpoint frequency, and raise the lock timeout values.

In a data sharing environment, group buffer pools have a great impact on overall sysplex performance. Group buffer pools reside in the Coupling Facility and are shared among the DB2 subsystems in the data sharing group. The ability of OPERTUNE to tune group buffer pools dynamically allows you to:

- Change threshold values to handle read-intensive work loads. You can even schedule changes to coincide with daily processing needs.

- Adjust the buffer pools and group buffer pools to handle planned or unplanned subsystem outages.

- Adjust group buffer pools as pages or partitions become GBP dependent.
Data sharing considerations

Some aspects of the behavior changes of OPERTUNE in a sysplex configuration are as follows:

- If you have a data sharing group selected, but no subsystem selected, OPERTUNE directs element changes to all active subsystems in the data sharing group.

- If a subsystem in a data sharing group is not active, OPERTUNE does not queue an element change to occur when the system is brought up.

- In a data sharing environment, if you have the same DB2 subsystem defined on multiple MVS images, OPERTUNE directs changes to the one that is currently active. If the subsystems are not part of a data sharing group, OPERTUNE requires clarification before it can issue a command affecting the subsystem.
Utilities

This chapter presents the following topics:

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  Batch .......................................................... 445
  CLIST ........................................................... 447
Adding an archive log to the active list .......................... 450

Batch interface

OPERTUNE allows you to invoke the batch interface from batch and from a REXX EXEC/CLIST.

Batch

the DDTBATCH member of the OPERTUNE control data set contains sample JCL that you can use to submit commands to OPERTUNE from batch (Figure 250). For example, this might be useful for setting a group of elements before running a workload and resetting them after the workload is complete. The person submitting the job must have the proper OPERTUNE authority to execute the commands.

Figure 250  Batch interface utility JCL (Part 1 of 2)

```bash
//BATCHCMD JOB (ACCT), 'BATCH JOB INTERFACE', CLASS=A, MSGCLASS=X
/**
**********
*****
*****   OPERTUNE BATCH JOB INTERFACE UTILITY
*****
**********
****
*****  THIS UTILITY CAN BE USED TO ISSUE OPERTUNE COMMANDS FROM A
*****  BATCH ENVIRONMENT.  THIS IS USEFUL FOR SETTING A SET OF ELEMENTS
```
The batch interface checks each input command for the presence of a target specifier. The specifier is optional if only one OPERTUNE is active on the MVS system on which the job is running. If more than one OPERTUNE is active and you omit the target specifier, you will receive an error message.

Issue commands as you would from any MVS console:

\[ \text{F opertuneID,command} \]

- \text{opertuneID} is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job)

- \text{command} is the command you want to issue

When using the batch interface, verify the following conditions:
- The OPERTUNE load libraries are specified in a STEPLIB DD statement, if they are not in the LNKLST.

- The SYSIN ddname contains the commands to be issued. A command in a column can be continued to the next line with a dash (-) designating a continuation of that command.

- The SYSPRINT ddname contains the command responses.

**CLIST**

The DDTBCLST member of the OPERTUNE CNTL library contains a sample CLIST from which you can execute a REXX/CLIST to invoke the batch interface for OPERTUNE (Figure 251).

**Figure 251 Batch REXX/CLIST**

```clist
PARSE UPPER ARG _ACTION _ELEMENT /* GET PARMS */
_OPTSSID = &&SSID /* <====CHG TO YOUR SSID */
_OPTLOAD = "'&&LOAD" /* <====CHG TO YOUR LOADLIB */

ISSUECMD:
"ALLOC F(SYSPRINT) DA(*) NEW,REUSE" /* OUTPUT TO TERMINAL */
"ALLOC F(SYSIN) NEW,REUSE. /* SYSIN TO TEMP DS */
   DSORG (PS), /* PHYSICAL SEQ */
   RECFM(F B) LRECL(80) BLKSIZE(800)" /* FB 80 X 800 */
/* */
.OPCMD.1 = 'F '_OPTSSID','_ACTION _ELEMENT /* ESTABLISH COMMAND */
"EXECIO 1 DISKWSYSIN (STEM _OPCMD. FINIS" /* PUT CMD IN 'SYSIN' */
TSOEXEC CALL _OPTLOAD||"(DDTKBTCH)" /* */
"FREE F(SYSPRINT)" /* FREE SYSPRINT */
"FREE F(SYSIN)" /* FREE SYSIN */
EXIT 0 /* END */
```

**Example**

The following example illustrates how to execute a REXX/CLIST to invoke the batch interface.
By using the REXX routines, OPERTUNE can validate a command before executing it. Assume an automated operations package that can execute CLISTs calls the CLIST in Figure 252 to perform an OPERTUNE command based on a trigger, such as a message or a threshold. An exclusion list is built to reject the CANCEL THREAD command for specific threads, even though the automated package picked up a condition where, in most cases, the thread should be canceled.

**Figure 252  Batch interface CLIST (Part 1 of 2)**

```rexx
/* REXX -------------------------------------------------------------- */
/*                                                   */
/* CHANGE &&SSID TO THE NAME OF YOUR OPERTUNE/DB2 SUBSYSTEM ID.  */
/* CHANGE &&LOAD TO THE NAME OF YOUR OPERTUNE/DB2 LOAD LIBRARY. */
/*                                                   */
/* WHAT:                                                    */
/*   EXAMPLE REXX/CLIST TO EXECUTE OPERTUNE/DB2 COMMANDS FROM A */
/*   CLIST USING ONE OR TWO PARAMETERS.                    */
/*                                                   */
/* WHO:                                                     */
/*   BMC SOFTWARE                                          */
/*                                                   */
/*   2101 CITYWEST BLVD.                                   */
/*                                                   */
/*   HOUSTON, TX  77042                                    */
/*                                                   */
/* USAGE:                                                  */
/*   TSO EX '&OPERTUNE_LOAD(DDTKBTC)' 'IN(DB2X) SET ACCESS(MAINT)' */
/*   TSO EX '&OPERTUNE_LOAD(DDTKBTC)' 'IN(DB2X) QUERY ALL' */
/*   TSO EX '&OPERTUNE_LOAD(DDTKBTC)' 'IN(DB2X) CANCEL(CONN(*))' */
/*   TSO EX '&OPERTUNE_LOAD(DDTKBTC)' ' HISTORY' */
/*   TSO EX '&OPERTUNE_LOAD(DDTKBTC)' ' MAINT' */
/*                                                   */
/* NOTE:  DB2X ON THE COMMAND LINE SHOULD BE REPLACED WITH YOUR DB2 */
/* SUBSYSTEM NAME                                             */
/*                                                   */
/* IF YOU ARE ENTERING 'OPERTUNE ONLY' COMMANDS, THERE */
/* MUST BE AT LEAST ONE SPACE BEFORE THE COMMAND */
/* SEE HISTORY AND MAINT COMMANDS ABOVE */
/*                                                   */
/* ------------- */
/*TRACE ?R*/        /* UNCOMMENT FOR TRACE */
PARSE UPPER ARG _DB2 _ACTION _ELEMENT        /* GET PARMS */
/* --------------------------------------------------------------- */
_OPTSSID = &&SSID      /* <----CHG TO YOUR SSID */
_OPTLOAD = '"&&LOAD"  /* <----CHG TO YOUR LOADLIB */
/* --------------------------------------------------------------- */
/* THIS GENERIC CLIST CAN BE ENHANCED TO EVALUATE AND RESTRICT THE */
/* COMMANDS PRIOR THEIR EXECUTION BY ADDING REXX CODE PRIOR TO THE */
/* 'ISSUECMD:' LABEL BELOW.  AN EXAMPLE OF THE NEED FOR THIS WOULD */
/* BE AN AUTOMATED PACKAGE CAPABLE OF EXECUTING A CLIST BASED ON */
/* A TRIGGER, ATTEMPTING TO CHANGE A DB2 VALUE VIA THIS CLIST OUTSIDE*/
/* OF ACCEPTED TIMES FOR THAT VALUE TO BE CHANGED. */
/* - - - - - -- - - - - - - - - - - - - - - - - - - - - - - - - - - */
/* IN THE EXAMPLE BELOW, A CHECK IS BEING MADE TO STOP ANY 'CHKPTFRQ'* /
```
/* CHANGES TO 'DB2X' PRIOR TO 18:00 HOURS.                        */
/* ================================================================= */
/* IF SUBSTR(_DB2,4,4) = 'DB2X' THEN                                 */
/* DO                                                                */
/* IF SUBSTR(_ACTION,1,3) = 'SET' THEN                              */
/* DO                                                                */
/* IF SUBSTR(_ELEMENT,1,8) = CHKPTFRQ THEN                          */
/* DO                                                                */
/* IF TIME('H') < 18 THEN                                            */
/* DO                                                                */
/* SAY 'NO CHANGE OF CHKPTFRQ ON DB2X PRIOR TO 18:00 HRS.'          */
/* EXIT                                                              */
/* END                                                               */
/* END                                                               */
/* ================================================================= */

ISSUECMD:
"ALLOC F(SYSPRINT) DA(*) NEW,REUSE," /* OUTPUT TO TERMINAL*/
LRECL(121)" /* OUTPUT TO TERMINAL */
"ALLOC F(SYSIN) NEW,REUSE," /* SYSIN TO TEMP DS */
DSORG (PS). /* PHYSICAL SEQ */
RECFM(F B) LRECL(80) BLKSIZE(800)" /* FB 80 X 800 */
/_OPCMD.1 = 'F '_OPTSSID','_DB2 _ACTION _ELEMENT /* CMD */
"EXECIO 1 DISKW SYSIN (STEM _OPCMD. FINIS" /* PUT CMD IN 'SYSIN' */
"TSOEXEC CALL _OPTLOAD|"(DDTKBTCH)" /* */
"FREE F(SYSPRINT)" /* FREE SYSPRINT */
"FREE F(SYSIN)" /* FREE SYSIN */
EXIT 0 /* END */
Adding an archive log to the active list

The DDTKLOGU member of the OPERTUNE control data set (Figure 253) is a utility that you can use to copy the content of an archive log data set to a predefined active log data set. This utility copies an archive log data set recorded in the subsystem BSDS before adding it to the list of active logs.

Figure 253  JCL to invoke the OPERTUNE copy log utility

To add an archive log to the active list, follow these steps:

1. Identify the name of the archive log data set you want to copy by listing the names of the archive logs in the BSDS; select option 6 from the OPERTUNE Operational Assist Menu (see Figure 186 on page 280).

2. Define the target active log data set (define two active log data sets if you are using dual logging). To define the active log data sets, use the Create Log Parameters panel, the CREATLOG command (see “Creating active logs” on page 291), or IDCAMS.

3. Run the Copy Log utility (DDTKLOGU) to copy the archive log to the target active log(s).

   **NOTE**

   Before copying from the archive log to the active log, you may need to allocate more space to the active log than was originally allocated.

4. Add the newly created active log(s) to the list of active log data sets, using the ADDLOG command (see “Adding active logs” on page 285 for command syntax). Use the LIKE keyword to specify the name of the archive data set identified in step 1. The new active log is added in RBA order, next to the current log.
NOTE

To prevent the subsystem from overwriting the active log containing archive data during a log switch, BMC Software recommends defining and adding a new set of active log data sets by using the ADDLOG command. Insert these new active logs directly after the active log. The new logs are used as a buffer between the current logs and the dearchived logs (added next to the current logs).
Chapter 12 Administrative functions

This chapter presents the following topics:

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BMC Software product authorization .................................. 455
Maintenance level .............................................. 455
User preference customization ........................................ 456
Tracing switch .................................................. 458
Reload OPERTUNE exits ......................................... 458

Overview

Select the Administrative/Utilities option from the OPERTUNE Main Selection Menu to display the Administrative/Utilities Menu (Figure 234 on page 388). The Administrative/Utilities Menu provides administrative, product-specific, and miscellaneous options. The options on this menu are described in Table 7.

Table 7 Options on the Administrative/Utilities menu (part 1 of 2)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. User profiles</td>
<td>secure OPERTUNE features by user</td>
<td>“User profiles” on page 405</td>
</tr>
<tr>
<td>2. OPERTUNE system</td>
<td>define multiple OPERTUNEs</td>
<td>“System profiles” on page 389</td>
</tr>
<tr>
<td>profiles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Security profiles</td>
<td>define OPERTUNE security profiles</td>
<td>“Security profiles” on page 400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Specific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. BMC product</td>
<td>access the OPERTUNE for DB2 Product Authorization Primary Menu, which</td>
<td>“BMC Software product</td>
</tr>
<tr>
<td>authorization</td>
<td>allows you to update your CPU ID or bypass CPU ID checking in case of</td>
<td>authorization” on page 455</td>
</tr>
<tr>
<td></td>
<td>disaster recovery</td>
<td></td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
<td>See</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>5. Maintenance level</td>
<td>provide information on the maintenance level of the OPERTUNE dialogs and any APARS that have been applied</td>
<td>“Maintenance level” on page 455</td>
</tr>
<tr>
<td>Miscelleneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Customize user preferences</td>
<td>set confirmation preferences and selection-character preferences</td>
<td>“User preference customization” on page 456</td>
</tr>
<tr>
<td>7. Profile enqueue maintenance</td>
<td>relieve profile enqueue problems</td>
<td>“Profile enqueue maintenance” on page 415</td>
</tr>
<tr>
<td>8. Tracing switch</td>
<td>turn tracing on and off dynamically</td>
<td>“Tracing switch” on page 458</td>
</tr>
<tr>
<td>9. Reload OPERTUNE exits</td>
<td>reload an OPERTUNE user exit dynamically without recycling the OPERTUNE address space</td>
<td>“Reload OPERTUNE exits” on page 458</td>
</tr>
<tr>
<td>10. BMC active product query</td>
<td>display a list of active BMC Software System and SQL Performance products</td>
<td></td>
</tr>
<tr>
<td>Target Selection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Host OPERTUNE selection</td>
<td>choose which OPERTUNE you want to be the host OPERTUNE system</td>
<td>“Selecting a host OPERTUNE” on page 42</td>
</tr>
<tr>
<td>12. Target OPERTUNE selection</td>
<td>choose which OPERTUNE or OPERTUNEs you want to be the target of commands</td>
<td>“Selecting a target OPERTUNE and subsystem” on page 44</td>
</tr>
<tr>
<td>13. Target subsystem selection</td>
<td>choose which subsystem or subsystems you want to be the target of commands</td>
<td>“Selecting a target OPERTUNE and subsystem” on page 44</td>
</tr>
</tbody>
</table>
BMC Software product authorization

BMC Software licenses its products for use on individual CPUs. The BMC Product Authorization facility allows you to manage the CPU IDs for which your BMC Software product is authorized. Select the BMC Product Authorization option from the Administrative/Utilities Menu to display the Product Authorization Selection Menu (Figure 254).

**Figure 254  Product Authorization Selection Menu**

```plaintext
DDTG DBI1  Command  ===> ________________________________________________________________

Choose one of the following by number. Then press Enter.

1. OPERTUNE for DB2
2. SYSTEM PERFORMANCE FOR DB2
```

Select the OPERTUNE FOR DB2 option from the Product Authorization Selection Menu (Figure 254) to display the OPERTUNE for DB2 Product Authorization Primary Menu.

Select the SYSTEM PERFORMANCE FOR DB2 option from the Product Authorization Selection Menu to display the System Performance for DB2 Product Authorization Primary Menu.

For more information on product authorization, see the System and SQL Performance for DB2 Customization Guide.

**Maintenance level**

Select the Maintenance level option from the Administrative/Utilities Menu to display the Maintenance panel (Figure 255 on page 456). This panel displays the current product version number as V_v.r.mmm:

- V is a literal
- v is the version number
- r is the release number
- mmm is the maintenance level
User preference customization

Select the Customize user preferences option from the Administrative/Utilities Menu to display the User Preference Menu (Figure 256).

Figure 255  OPERTUNE Maintenance panel

```
DDTG DBI1   Maintenance
Command ===> __________________________________________________ SCROLL ====> CSR

OPERTUNE Version . . . . . : V3.6.00

After reviewing the APAR list, type End and press Enter.

APARs Applied
************************************************************************** BOTTOM OF DATA **************************************************************************
```

The APARs Applied field lists the APARs you have applied to the product as recommended by BMC Software Customer Support. This information is useful for determining the exact maintenance level of the ISPF dialogs.

User preference customization

Select the Customize user preferences option from the Administrative/Utilities Menu to display the User Preference Menu (Figure 256).

Figure 256  User Preference menu

```
DDTAUPF 2   User Preference Menu
Command ===> ________________________________________________

Choose one of the following by number. Then press Enter.

1. Confirmations
2. General
3. Profile alteration
4. Element activation
5. Thread/Connection
6. Table space
7. Group buffer pool
8. Data set extents
9. Target selection
```
The User Preference Menu is used to set confirmation preferences and selection-character preferences.

- Confirmation preferences determine whether OPERTUNE prompts you to confirm commands and deletions.

- Selection-character preferences determine the characters used on various panels to make selections from displayed lists.

The selection-character preferences are grouped into related groups on the User Preference Menu. Some groups share selection characters. Changing a selection character in one group changes the same selection character in all of the groups.

For example, the Selection character is found in the General (Selection character), Profile alteration (select entry), and Data set extents (Select data set) groups. If you change the character in the Data set extents group, the character also changes in the General and Profile alteration groups.

Table 8 describes preferences set for each option on the User Preference Menu.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—Confirmation</td>
<td>specify whether OPERTUNE prompts you to confirm commands and deletions</td>
</tr>
<tr>
<td>2—General</td>
<td>specify the selection characters that are used on many of the panels throughout OPERTUNE</td>
</tr>
<tr>
<td>3—Profile alteration</td>
<td>Specify the selection characters that are used on the profile panels (group, schedule, user, system, and security profiles). See Chapter 5, “Group profiles,” Chapter 6, “Schedule profiles,” and Chapter 8, “OPERTUNE security.”</td>
</tr>
<tr>
<td>4—Element activation</td>
<td>Specify the selection characters that are used on the Element Selection panel (see “Element command overview” on page 51).</td>
</tr>
<tr>
<td>5—Thread/Connection</td>
<td>Specify the selection characters that are used on the Thread/Connection List panel (see “Canceling threads/connections” on page 295).</td>
</tr>
<tr>
<td>6—Table space</td>
<td>Specify the selection characters that are used on the In Use Table Space List panel (see “Initiate a subsystem checkpoint” on page 303).</td>
</tr>
<tr>
<td>7—Group buffer pool</td>
<td>Specify the selection characters that are used on the group buffer pool panels (see “Group buffer pool operations” on page 317).</td>
</tr>
<tr>
<td>8—Data set extents</td>
<td>Specify the selection characters that are used on the open data component panels (see “Open data component operations” on page 323).</td>
</tr>
<tr>
<td>9—Target selection</td>
<td>Specify the selection characters that are used to select primary and secondary target OPERTUNEs and target subsystems (see “Selecting a target OPERTUNE and subsystem” on page 44).</td>
</tr>
</tbody>
</table>
Tracing switch

Select the **Tracing switch** option from the Administrative/Utilities Menu to display the User Requests Tracing panel (Figure 257). Use this panel to dynamically turn the tracing of user requests on or off for the dialog session. Tracing is useful if problem diagnosis is necessary. Tracing is turned off by default. You must specify the DDTTRACE DD name in the dialog CLIST to be able to turn user requests tracing on.

**Figure 257  User Requests Tracing panel**

Reload OPERTUNE exits

Select the **Reload OPERTUNE exits** option from the Administrative/Utilities Menu to display the Reload OPERTUNE Exits panel (Figure 258).

**Figure 258  Reload OPERTUNE Exits panel**

Use this panel to reload one or more user exits dynamically, without recycling the OPERTUNE address space. Type **S** in the **Act** field beside each exit to be reloaded. The OPERTUNE RELOADX command causes a new copy of an exit to be loaded into storage and activated for immediate use by OPERTUNE.
You can issue the RELOADX command from the operator console using the MODIFY command, as follows:

```
F opertuneID,RELOADX
```

`opertuneID` is the OPERTUNE system profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job).

The command syntax for the RELOADX command is as follows:

```
RELOADX ( exitName )
```

Specify the name of the exit (`exitName`) to be reloaded.

**Example**

To reload DDT0XIT0 in OPERTUNE DDTA, issue the following command from the console:

```
F DDTA,RELOADX(DDT0XIT0)
```
Diagnostic procedures

This appendix presents the following topics:

Interpreting user abends ............................................................... 461
Producing a DUMP ....................................................................... 461
Using OPERTUNE diagnostic tools ............................................. 463
   Enabling OPERTUNE dumps .................................................. 463
   Using the audit log ................................................................. 464
   Using the trace facility ............................................................ 464
Applying maintenance with zaps .................................................. 464

Interpreting user abends

User abends issued by OPERTUNE are accompanied by messages that explain the error. The last three digits of the error message match the user abend issued. For example, U406 is accompanied by a BMC31406 message.

See Appendix E, “Messages and codes” for a complete explanation of messages.

Producing a DUMP

If you encounter a problem using OPERTUNE and contact BMC Software Customer Support, the representative might ask you to perform one or more of the diagnostic steps described below. These steps produce information that will help with problem diagnosis.
When necessary, you can take an SVC DUMP of an active OPERTUNE, subsystem, or TSO region.

You may be asked to provide DUMP data for any or all of the following MVS address spaces:

- subsystem address space (SSAS)
- database address space (DBAS)
- inter-region lock manager (IRLM)
- OPERTUNE started task
- OPERTUNE TSO user

If the problem can be recreated, turn on the DB2 global trace before recreating it to assist with diagnosis. Issue the following command to DB2:

```
-START TRACE(GLOBAL)
```

Before taking an SVC DUMP, ensure that an MVS DUMP data set is available. To check the status of MVS DUMP data sets, issue the following MVS command:

```
DISPLAY DUMP,T
```

To take a DUMP while a region is active, issue the following MVS command:

```
DUMP COMM=(OPERTUNE)
```

The following WTOR message appears in response to this command:

```
## IEE094D SPECIFY OPERAND(S) FOR DUMP COMMAND
```

In response to this message, specify the DUMP parameters as follows:

```
##,JOBNAME=(regionJobName),SDATA=(RGN,SUM,CSA,SQA),END
```

## is the WTOR number and regionJobName is the name of the MVS region to DUMP (for example, DB2PDBM1).

If the OPERTUNE Customer Support representative asks you to ship the SVC DUMP to BMC Software, copy the SVC DUMP (unformatted) to tape or cartridge using IEBGENER.

Specify the SYSUT2 data set with the following DCB attributes:

```plaintext
DCB=(RECFM=F,LRECL=4104,BLKSIZE=4104) - MVS/XA
DCB=(RECFM=F,LRECL=4160,BLKSIZE=4160) - MVS/ESA or later
```
Using OPERTUNE diagnostic tools

This section describes the diagnostic tools available with OPERTUNE.

Enabling OPERTUNE dumps

If you want OPERTUNE to provide a DUMP when an abend occurs in the ISPF dialogs, follow these steps:

- Select option 0.7 from the main ISPF menu and set ENBLDUMP on.
- Ensure that your logon procedure has a SYSUDUMP DD statement specified, or use the TSO ALLOC command when the abend occurs.

Examples

Output is sent to SYSOUT X:

```
TSO ALLOC FI(SYSUDUMP) CLASS(X)
```

Output is sent to a pre-allocated data set:

```
TSO ALLOC FI(SYSUDUMP) DSN('HLQ.SYSUDUMP') OLD
```

If an abend occurs in the OPERTUNE ISPF dialogs, a panel is displayed that summarizes the following information about the abend:

- load module
- CSECT
- password
- save area flow

Record this information and supply it to the OPERTUNE Customer Support representative.

In addition, OPERTUNE allows you to perform the following tasks:

- recover without a DUMP
- terminate with a DUMP
- terminate without a DUMP

Unless the problem has been reported, you should request to terminate with a DUMP.
Using the audit log

The started task procedure for OPERTUNE has an optional audit log for recording all commands sent to subsystems and all responses received. The audit log is activated by specifying the DDTLOG DD statement (the OPERTUNE started task procedure is distributed with the audit log active).

The log is written to SYSOUT but, if you want to write the audit log to DASD, you can pre-allocate a data set with the following attributes: LRECL=121, RECFM=FB, DSORG=PS. If you allocate the data set in the OPERTUNE procedure with DISP=MOD, you must periodically check and empty the data set to prevent it from filling up. If you specify DISP=OLD, you should copy the data set each time OPERTUNE is terminated.

If you want to write the audit log to a data set, specify DCB=BUFNO=1 on the DD statement to prevent buffering from occurring. If you do not make this specification, you will be unable to view the latest OPERTUNE logged changes through the ISPF Browse option. In addition, if you perform an IPL on the MVS system while OPERTUNE is still up, some OPERTUNE changes may not be logged to the data set.

Using the trace facility

BMC Software Customer Support might ask you to provide additional diagnostic trace information. OPERTUNE has a built-in trace facility that provides detailed trace information about the commands issued to subsystems and the responses received. Activate this facility by specifying a DDTTRACE DD statement (to SYSOUT) in the OPERTUNE started task procedure or in the ISPF dialogs, by adding the DD statement to your logon procedure. This facility is not automatically placed in the default procedure because of the overhead involved with its use.

If you want to write the trace to DASD, preallocate a data set with the following attributes: DISP=OLD, LRECL=121, RECFM=FB, DSORG=PS. Because this data set is activated for only brief time periods at the request of a BMC Software Customer Support representative, be sure that it is large enough to hold all trace data.

Applying maintenance with zaps

Use member DDTZAP in the CNTL library to apply zaps and to track maintenance.
Integration with AutoOPERATOR and MAINVIEW

This appendix provides information about the interaction between MAINVIEW for DB2 (MVDB2) and OPERTUNE for DB2. It is intended for MVDB2 users who are also using OPERTUNE.

This appendix also provides information about automating selected OPERTUNE for DB2 (OPERTUNE) functions by integrating them with MAINVIEW AutoOPERATOR (AutoOPERATOR) and MAINVIEW for DB2 (MAINVIEW).

This appendix includes the following topics:

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Integrating OPERTUNE, AutoOPERATOR, and MAINVIEW .................. 466
  How the solutions work ............................................................. 467
  Customizing the solutions ....................................................... 467
  Available modes ................................................................. 467
  Prerequisites ................................................................. 468
  Solutions ................................................................. 468
What you must do ................................................................. 469
  Activating monitors (Task 1) .................................................. 469
  Customizing QDTINIT1 (Task 2) ............................................. 470
  Activating QDTINIT1 values (Task 3) .................................... 470
  Running QDTINIT1 (Task 4) .................................................. 471
Optional tasks ........................................................................ 471
  Changing and activating QDTINIT1 values ................................ 471
  Resetting threshold counters ................................................. 472
Thread solution ....................................................................... 473
Log data set solution .................................................................. 476
Log buffer solution .................................................................... 478
EDM pool solution ..................................................................... 481
RID pool solution ..................................................................... 483
Data set utilization solution ....................................................... 485
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MAINVIEW for DB2 support

OPERTUNE is a BMC Software product that allows you to dynamically modify DB2 subsystems in order to resolve performance tuning or operations management problems. MAINVIEW for DB2 provides an interface to OPERTUNE, which allows you to make changes to installation parameter values (DSNZPARMs). To communicate with OPERTUNE, you need release 6.1.01 or later of MAINVIEW for DB2.

The MAINVIEW for DB2 EZDZPARM Easy Menu leads you to more than 20 windows mode views, which provide information about the installation parameters in these categories:

- DB2 System
- Locking
- Logging
- Distributed
- Storage and Data Sets
- Authorization
- Application-Related

See the MAINVIEW for DB2 User Guide for more detailed information about these views.

You can modify many of the installation parameters by typing over the value to be changed. The modifiable fields are displayed in green, the default for fields with a defined action.

**NOTE**

The OPERTUNE load library must be concatenated in the PAS started task STEPLIB to enable the actions.

The ability to issue actions that invoke OPERTUNE commands is subject to OPERTUNE security. The commands are passed from MAINVIEW to OPERTUNE with the TSO ID of the user invoking the action.

Integrating OPERTUNE, AutoOPERATOR, and MAINVIEW

Several automatic solutions have been designed by BMC Software to take advantage of the combined strengths of OPERTUNE, AutoOPERATOR, and MAINVIEW.
How the solutions work

The solutions use MAINVIEW to detect specific conditions or events. When a condition or event occurs, MAINVIEW triggers rules in AutoOPERATOR. The rules accomplish the following actions:

- issue OPERTUNE element commands to dynamically adjust DB2 ZPARMs
- perform OPERTUNE operational assist functions to perform DB2 maintenance functions

For example, MAINVIEW detects there is a thread shortage condition. MAINVIEW prompts AutoOPERATOR to run a rule that issues the MAXTHDS OPERTUNE command to dynamically increase the maximum number of threads.

The solutions issue AutoOPERATOR ALERTs and enter information in the AutoOPERATOR journal.

This appendix includes detailed descriptions for each solution. For a list of the solutions, see Table 9 on page 468.

Customizing the solutions

You can customize the solutions by editing variables in the QDTINIT1 REXX EXEC. The variables limit the number of times that corrective action is taken by OPERTUNE, and they control the amount of the corrective action. In addition, you can customize the solutions by enabling, disabling, or adjusting the thresholds of the MAINVIEW monitors that are used for the solutions.

This appendix contains detailed descriptions for customizing each solution.

Available modes

You can run the solutions in ADVISOR mode or in REPAIR mode:

- In ADVISOR mode, the solution issues an ALERT to which an operator must respond. The ALERT has a priority of MAJOR.
- In REPAIR mode, the solution issues an ALERT and runs automatically. The ALERT has a priority of MAJOR.
Prerequisites

To take advantage of the solutions that are described in this appendix, you must first concatenate the OPERTUNE load library in the PAS started task STEPLIB.

**NOTE**
OPERTUNE is often installed into the same libraries as the System and SQL Performance products for DB2. If you perform the customization to activate the MAINVIEW for DB2 – Data Collector component, OPERTUNE may be in the same LOAD library already concatenated into the PAS STEPLIB.

Solutions

Table 9 lists the available solutions and briefly describes each solution.

<table>
<thead>
<tr>
<th>Solution</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>thread</td>
<td>detect thread or connection shortage, and increase the number of threads available</td>
<td>473</td>
</tr>
<tr>
<td>log data set</td>
<td>detect active log out-of-space or offload delays, and add a new active log</td>
<td>476</td>
</tr>
<tr>
<td>log buffer</td>
<td>detect log buffer shortage, increase log buffer space, and reset the related write threshold</td>
<td>478</td>
</tr>
<tr>
<td>EDM pool</td>
<td>detect EDM pool over-utilization, and increase the size of the EDM pool</td>
<td>481</td>
</tr>
<tr>
<td>RID pool</td>
<td>detect RID pool shortage, and increase the amount of RID pool storage</td>
<td>483</td>
</tr>
<tr>
<td>data set utilization</td>
<td>detect excessive data set close activity, and increase the number of data sets that can be open at the same time</td>
<td>485</td>
</tr>
<tr>
<td>checkpoint</td>
<td>issue a checkpoint when the last checkpoint taken occurred before a preset interval</td>
<td>487</td>
</tr>
</tbody>
</table>
What you must do

To use the solutions, you must perform the tasks shown in Table 10:

**Table 10  Tasks for using the solutions**

<table>
<thead>
<tr>
<th>Task</th>
<th>What to do</th>
<th>For details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Activate the BLKDMRW and background monitors in MAINVIEW for DB2. <strong>Note</strong>: The log data set solution does not require the BLKDMRW or background monitor.</td>
<td>“Activating monitors (Task 1)” on page 469</td>
</tr>
<tr>
<td>2</td>
<td>Customize the QDTINIT1 REXX EXEC for each of the solutions.</td>
<td>“Customizing QDTINIT1 (Task 2)” on page 470</td>
</tr>
<tr>
<td>3</td>
<td>Activate your customizations.</td>
<td>“Activating QDTINIT1 values (Task 3)” on page 470</td>
</tr>
<tr>
<td>4</td>
<td>Run the QDTINIT1 REXX EXEC in AutoOPERATOR. <strong>Note</strong>: The QDTINIT1 REXX EXEC runs automatically when you initialize AutoOPERATOR.</td>
<td>“Running QDTINIT1 (Task 4)” on page 471</td>
</tr>
<tr>
<td>5</td>
<td>Enable the AutoOPERATOR rule set named AAORULDT.</td>
<td>AutoOPERATOR Basic Automation Guide</td>
</tr>
</tbody>
</table>

**Activating monitors (Task 1)**

Each solution requires different monitors or background monitors to be activated. You can specify the values for the monitors. Table 11 lists the monitors to activate and the default settings for each solution.

**Table 11  Monitors to be activated**

<table>
<thead>
<tr>
<th>Solution</th>
<th>BLKDMRW Monitor and default value setting</th>
<th>Background monitor message</th>
</tr>
</thead>
<tbody>
<tr>
<td>thread</td>
<td>THDUT wmax=85%</td>
<td>DZI020S IMS Tasks queued</td>
</tr>
<tr>
<td></td>
<td>CONUT DBAT wmax=80%</td>
<td>DZI030S CICS tasks queued</td>
</tr>
<tr>
<td></td>
<td>CONUT TSO wmax=85%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CONUT BATCH wmax=85%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CNVLM wval=NZ</td>
<td></td>
</tr>
<tr>
<td>log data set</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>log buffer</td>
<td>LOGWT wval=NZ</td>
<td>none</td>
</tr>
<tr>
<td>EDM pool</td>
<td>EDMUT NOSK wmax=70%</td>
<td>none</td>
</tr>
<tr>
<td>RID pool</td>
<td>MIAPF STOR wmax=NZ</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td>RIDUT wmax=85%</td>
<td></td>
</tr>
</tbody>
</table>

---

What you must do

To use the solutions, you must perform the tasks shown in Table 10:

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<tr>
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</tr>
<tr>
<td></td>
<td>CONUT DBAT wmax=80%</td>
<td>DZI030S CICS tasks queued</td>
</tr>
<tr>
<td></td>
<td>CONUT TSO wmax=85%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CONUT BATCH wmax=85%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CNVLM wval=NZ</td>
<td></td>
</tr>
<tr>
<td>log data set</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>log buffer</td>
<td>LOGWT wval=NZ</td>
<td>none</td>
</tr>
<tr>
<td>EDM pool</td>
<td>EDMUT NOSK wmax=70%</td>
<td>none</td>
</tr>
<tr>
<td>RID pool</td>
<td>MIAPF STOR wmax=NZ</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td>RIDUT wmax=85%</td>
<td></td>
</tr>
</tbody>
</table>
What you must do

Customizing QDTINIT1 (Task 2)

QDTINIT1 is a REXX EXEC that contains variables for each solution. By modifying the variable settings, you can control when a solution runs, what it does when it runs, and how many times it will run.

QDTINIT1 contains a section for each solution. For most solutions, you can set global values that apply to all DB2 subsystems. For all of the solutions, you can set values for specific DB2 subsystems. Values that are set for a specific DB2 subsystem override the global values that are set for the solution.

QDTINIT1 is a member in the UBBPROC data set. You use ISPF to modify the variables and to save your changes.

Each section in QDTINIT1 is discussed in detail in this appendix. Table 9 on page 468 lists the solutions and lists where they are discussed.

Activating QDTINIT1 values (Task 3)

To activate the customizations that you made in the QDTINIT1 REXX EXEC, take the following steps:

1. Type the following MVS modify command on a command line.

   ```
   F autoOperatorSubsystemID, E B, SYSPROC
   ```

   Replace `autoOperatorSubsystemID` with the AutoOPERATOR subsystem ID.

2. Review the Log Display panel to ensure that no errors were reported.

### Table 11 Monitors to be activated

<table>
<thead>
<tr>
<th>Solution</th>
<th>BLKDMRW Monitor and default value setting</th>
<th>Background monitor message</th>
</tr>
</thead>
<tbody>
<tr>
<td>data set utilization</td>
<td>DSUTL wmax=85%</td>
<td>none</td>
</tr>
<tr>
<td>checkpoint</td>
<td>CKPFR INTERVAL=00:20:00 WVAL=&lt;1</td>
<td>none</td>
</tr>
</tbody>
</table>

For information about activating monitors, see the MAINVIEW for DB2 User Guide.
Running QDTINIT1 (Task 4)

After you make your changes to the QDTINIT1 REXX EXEC, run it to activate the solutions.

**NOTE**
The QDTINIT1 REXX EXEC runs automatically when you initialize AutoOPERATOR.

To run QDTINIT1, take the following steps:

1. On the MAINVIEW Selection Menu, select the **AutoOPERATOR** option (3) to display the Primary Option Menu.

2. On the Primary Option Menu, select the **Display Journal** option (L) to display the Log Display panel.

**NOTE**
If you want to customize the QDTINIT1 REXX EXEC and have not done so, you can do it now.

3. Type `%QDTINIT1` on the **Command** line, and press **Enter**.

The REXX EXEC runs and activates the solutions. A verification program reports any syntax errors or unsupported values. If any errors are reported, the REXX EXEC does not activate the solutions.

Optional tasks

You can change and activate the values in QDTINIT1 at any time. You can also reset the threshold counters maintained by the solutions at any time. This section describes how to accomplish these tasks.

Changing and activating QDTINIT1 values

At any time, you can make changes to the values in the QDTINIT1 REXX EXEC. You accomplish this in the same way that you customized QDTINIT1. For more information, see “Customizing QDTINIT1 (Task 2)” on page 470.
To activate your changes, take the following steps:

1 Type the following MVS MODIFY command on a command line:

   \[ F \{autoOperatorSubsystemID,E,B,SYSPROC \} \]
   
   Replace \textit{autoOperatorSubsystemID} with the AutoOPERATOR subsystem ID.

2 Look on the Log Display panel to ensure that no errors were reported.

3 Run the QDTINIT1 REXX EXEC in AutoOPERATOR. For details, see “Running QDTINIT1 (Task 4)” on page 471.

\begin{quote}
\textbf{NOTE}
\end{quote}

The QDTINIT1 REXX EXEC runs automatically when you initialize AutoOPERATOR.

\section*{Resetting threshold counters}

The solutions maintain threshold counters for each DB2 subsystem based on the number of times that a solution is triggered. The threshold counters are reset automatically when OPERTUNE starts for a DB2 subsystem. Additionally, you might want to manually reset the threshold counters.

To reset the threshold counters manually, take the following steps:

1 On the MAINVIEW Selection Menu, select the \textbf{AutoOperator} option (3) to display the Primary Option Menu.

2 On the Primary Option Menu, select the \textbf{Display Journal} option (L) to display the Log Display panel.

3 Type \texttt{%QDTRESET DB2ssid} on the \texttt{Command} line, and press \texttt{Enter}.

\texttt{DB2ssid} is the DB2 subsystem ID for which you want to reset the threshold counters.
Thread solution

The thread solution detects thread or connection shortages and increases the number of threads that are available.

How the solution works

The thread solution works in the following way:

1. MAINVIEW monitors the following types of threads for DB2 thread shortage conditions:
   - local
   - remote
   - TSO
   - batch
   - remote concurrent

2. When a shortage is detected, MAINVIEW notifies AutoOPERATOR to execute the thread solution.

3. AutoOPERATOR issues an ALERT.

   **NOTE**

   If you are running the solution in ADVISOR mode, the operator must reply to the ALERT.

4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the thread solution issues a MAXTHDS element command to increase the number of threads available. The increase is applied to the maximum thread count value for the type of ALERT that has been issued.

   For example, if the ALERT is issued for remote threads, the maximum value for remote threads is increased but the maximum value for the other types of threads remains the same.

   The number is increased by the percentage you specified in QDTINIT1.

   For more information about the MAXTHDS element command, see “MAXTHDS—Maximum number of threads” on page 165.
What to customize in QDTINIT1

The DB2 Thread Solution section in QDTINIT1 contains two sets of variables that you can customize—global and subsystem.

The global variables are required. The subsystem variables are optional.

Customizing the global variables

The first set of variables in the DB2 Thread Solution section are the global variables. These variables are required and contain default values. The values that are specified for the global variables affect all of the DB2 subsystems.

You can leave the values as they are, or you can change them. Table 12 on page 475 describes each variable.

Customizing the subsystem variables

The second set of variables in the DB2 Thread Solution section are the subsystem variables. These variables are optional. If you specify them, they affect only the specified subsystem. Subsystem specific values override global values.

- To specify subsystem variables, replace #### in the variable names and REXX statements with the DB2 subsystem ID you want the values to affect.

- To specify values for additional subsystems, copy the variables and the REXX statements in the subsystem area, paste them after the existing statements, and change the DB2 subsystem ID.

Table 12 on page 475 describes each variable.
Global and subsystem variable definitions

Table 12 lists and describes the variables that are used in the thread solution.

Table 12  Thread solution variables

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Default global value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_MAXTHDS_MODE.*</td>
<td>Mode in which you want to run the solution. Specify ADVISOR or REPAIR. For more information, see “Available modes” on page 467.</td>
<td>ADVISOR</td>
</tr>
<tr>
<td>DT_MAXTHDS_LIMIT.*</td>
<td>Number of times the solution will run. For example, if you set this to 5, the solution will execute the OPERTUNE MAXTHDS element command up to five times. The solution will not execute the command a sixth time.</td>
<td>0</td>
</tr>
<tr>
<td>DT_MAXTHDS_PERCENT.*</td>
<td>Percentage by which the solution increases the number of threads. Each time the solution runs, the maximum number of threads increases by this percentage of the current value. For example, you set the percentage to 10. Originally, there are 100 threads. The first time that the solution runs, 10 threads are added, making the value 110. The second time that the solution runs, 11 threads are added, making the value 121. The increase is applied to the maximum thread count value for the type of ALERT that is issued. For example, if the ALERT is for TSO threads, the maximum for TSO threads is increased but the maximum for the other types of threads remains the same.</td>
<td>10</td>
</tr>
</tbody>
</table>

In the variable name, replace * with one of the following values:

- $ALL to specify global values
- a DB2 subsystem ID to specify subsystem variables
Log data set solution

The log data set solution detects active log out-of-space conditions or offload delays and adds a new set of active logs.

NOTE
The solution works for dual logging only.

How the solution works

NOTE
The set of log data sets that the solution adds must have been created previously with the proper attributes. If they are not, a dynamic allocation error will result. For more information, see “Creating active logs” on page 291.

The log data set solution works in the following way:

1. MAINVIEW monitors the active DB2 log for out-of-space or offload delay conditions.

2. When an out-of-space or offload delay condition is detected, MAINVIEW notifies AutoOPERATOR to execute the log data set solution.

3. AutoOPERATOR issues an ALERT.

NOTE
If you are running the solution in ADVISOR mode, the operator must reply to the ALERT.

4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the log data set solution executes the OPERTUNE Active Log Manipulation operational assist to add an active log.

The active logs added are the ones that you specified in QDTINIT1.

For more information about the Active Log Manipulation operational assist, see “Active log manipulation” on page 281.
What to customize in QDTINIT1

The variables in the DB2 Log Data Set Solution section are used to specify a threshold and data set names for each subsystem to which you want to automatically add active logs.

For each subsystem, replace #### in the variable names and REXX statements with the DB2 subsystem ID you want the values to affect.

To specify values for additional subsystems, copy the variables and the REXX statements, paste them after the existing statements, and change the DB2 subsystem ID.

Variable definitions

Table 13 lists and describes the variables used in the log data set solution.

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_ADDLOG_MODE.*</td>
<td>Mode in which you want to run the solution Specify ADVISOR or REPAIR. For more information, see “Available modes” on page 467.</td>
</tr>
<tr>
<td>DT_ADDLOG_LIMIT.*</td>
<td>Enables and disables the solution A value of 0 (zero) disables the solution. A value of 1 (one) enables the solution. For example, if you set this to 1, the solution will run and then set the value to 0. This keeps the solution from adding log data set after log data set.</td>
</tr>
<tr>
<td>DT_ADDLOG_COPY1_1.*</td>
<td>Name of the copy 1 log data set The data set must have been created previously with the proper attributes.</td>
</tr>
<tr>
<td>DT_ADDLOG_COPY2_1.*</td>
<td>Name of the copy 2 log data set The data set must have been created previously with the proper attributes.</td>
</tr>
</tbody>
</table>

In the variable name, replace * with a DB2 subsystem ID to specify subsystem variables.
Log buffer solution

The log buffer solution detects log buffer shortages and increases the log buffer space and related write threshold.

How the solution works

The log buffer solution works in the following way:

1. MAINVIEW monitors for DB2 log buffer shortage conditions.

2. When a buffer shortage is detected, MAINVIEW notifies AutoOPERATOR to execute the log buffer solution.

3. AutoOPERATOR issues an ALERT.

4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the log buffer solution issues an OUTBUFF element command to increase the buffer size and a LOGTHRSH element command to increase the write threshold.

The size of the log buffer and the wait threshold for the logs are increased by the percentage that you specified in QDTINIT1.

For more information about the OUTBUFF element command see “OUTBUFF—Output log buffer size” on page 183.

For more information about the LOGTHRSH element command, see “LOGTHRSH—Log write threshold” on page 155.

NOTE

If you are running the solution in ADVISOR mode, the operator must reply to the ALERT.
What to customize in QDTINIT1

The DB2 Log Buffer Solution section in QDTINIT1 contains two sets of variables that you can customize—global and subsystem.

The global variables are required. The subsystem variables are optional.

Customizing the global variables

The first set of variables in the DB2 Log Buffer Solution section are the global variables. These variables are required and contain default values.

The values specified for the global variables affect all DB2 subsystems.

You can leave the values as they are, or you can change them. Table 14 on page 480 describes each variable.

Customizing the subsystem variables

The second set of variables in the DB2 Log Buffer Solution section are the subsystem variables. These variables are optional. If you specify them, they affect only the specified subsystem. Subsystem specific values override default values.

- For a subsystem, replace #### in the variable names and REXX statements with the DB2 subsystem ID that you want the values to affect.

- To specify values for additional subsystems, copy the variables and the REXX statements, paste them after the existing statements, and change the DB2 subsystem ID.
## Global and subsystem variable definitions

Table 14 lists and describes the variables that are used in the log buffer solution.

### Table 14  Log buffer solution variables

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Default global value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_OUTBUF_MODE.*</td>
<td>mode in which you want to run the solution</td>
<td>ADVISOR</td>
</tr>
<tr>
<td></td>
<td>Specify ADVISOR or REPAIR. For more information, see “Available modes” on page 467.</td>
<td></td>
</tr>
<tr>
<td>DT_OUTBUF_LIMIT.*</td>
<td>number of times that the solution will run. For example, if you set this to 4, the solution will execute the OPERTUNE OUTBUFF and LOGTHRSH element commands up to four times. The solution will not execute the commands a fifth time.</td>
<td>0</td>
</tr>
<tr>
<td>DT_OUTBUF_PERCENT.*</td>
<td>percentage by which the solution increases the size of the output log and log wait threshold. Each time the solution runs, the buffer’s size and the wait threshold are increased by this percentage. For example, you set the percentage to 10. Originally, there is 100 KB of output buffer storage and the threshold is 100. The first time that the solution runs, the buffer is increased by 10 KB to 110 KB; and the threshold is increased by 10 to 110. The second time that the solution runs, the buffer is increased by 11 KB to 121 KB; and the threshold is increased by 11 to 121.</td>
<td>10</td>
</tr>
</tbody>
</table>

In the variable name, replace * with one of the following values:

- $ALL to specify global values
- a DB2 subsystem ID to specify subsystem variables
EDM pool solution

The EDM pool solution detects EDM pool over-utilization and increases the size of the EDM pool.

How the solution works

The EDM pool solution works in the following way:

1. MAINVIEW monitors for over-utilization of the EDM pool.
2. When the EDM pool reaches 70% and 100% utilization, MAINVIEW notifies AutoOPERATOR to execute the EDM pool solution.
3. AutoOPERATOR issues an ALERT.

   NOTE

   If you are running the solution in ADVISOR mode, the operator must reply to the ALERT.

4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the EDM pool solution issues an EDMPOOL element command to increase the size of the EDM pool.
   The pool is increased by the percentage you specified in QDTINIT1.

   For more information about the EDMPOOL element command, see “EDMPOOL—EDM pool size” on page 130.

What to customize in QDTINIT1

The EDM Pool Solution section in QDTINIT1 contains two sets of variables you can customize—global and subsystem.

The global variables are required. The subsystem variables are optional.

Customizing the global variables

The first set of variables in the EDM Pool Solution section are the global variables. These variables are required and contain default values.

The values that are specified for the global variables affect all DB2 subsystems.
You can leave the values as they are, or you can change them to what you want. Table 15 on page 482 describes each variable.

### Customizing the subsystem variables

The second set of variables in the EDM Pool Solution section are the subsystem variables. These variables are optional. If you specify them, they affect only the specified subsystem. Subsystem specific values override the default values.

- To specify subsystem variables, replace #### in the variable names and REXX statements with the DB2 subsystem ID that you want the values to affect.

- To specify values for additional subsystems, copy the variables and the REXX statements, paste them after the existing statements, and change the DB2 subsystem ID.

### Global and subsystem variable definitions

Table 15 lists and describes the default variables that are used in the EDM pool solution.

**Table 15  EDM pool solution variables**

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Default global value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_EDMPOOL_MODE.*</td>
<td>Mode in which you want to run the solution</td>
<td>ADVISOR</td>
</tr>
<tr>
<td></td>
<td>Specify ADVISOR or REPAIR. For more information, see “Available modes” on page 467.</td>
<td></td>
</tr>
<tr>
<td>DT_EDMPOOL_LIMIT.*</td>
<td>Number of times the solution will run</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>For example, if you set this to 2, the solution will execute the OPERTUNE EDMPOOL element command up to two times. The solution will not execute the command a third time.</td>
<td></td>
</tr>
<tr>
<td>DT_EDMPOOL_PERCENT.*</td>
<td>Percentage by which the solution increases the size of the EDM pool</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Each time the solution runs, the pool size is increased by this percentage.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For example, you set the percentage to 10. Originally, there is 1000 KB of storage. The first time that the solution runs the pool is increased by 100 KB to 1100 KB. The second time that the solution runs, the pool is increased by 110 KB to 1210 KB.</td>
<td></td>
</tr>
</tbody>
</table>

In the variable name, replace * with one of the following values:

- $ALL to specify global values
- a DB2 subsystem ID to specify subsystem variables
RID pool solution

The RID pool solution detects RID pool shortages and increases the amount of RID pool storage.

How the solution works

The RID pool solution works in the following way:

1. MAINVIEW monitors for RID pool shortages.
2. When the RID pool reaches 70% and 100% utilization and when RID processing fails due to a lack of storage, MAINVIEW notifies AutoOPERATOR to execute the RID pool solution.
3. AutoOPERATOR issues an ALERT.
4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the RID pool solution issues an EDMPOOL element command to increase the size of the pool.

   The pool is increased by the percentage that you specified in QDTINIT1.

   For more information about the EDMPOOL element command, see “EDMPOOL—EDM pool size” on page 130.

What to customize in QDTINIT1

The RID Pool Solution section in QDTINIT1 contains two sets of variables that you can customize—global and subsystem.

The global variables are required. The subsystem variables are optional.

Customizing the global variables

The first set of variables in the RID Pool Solution section are the global variables. These variables are required and contain default values.

The values that are specified for the global variables affect all of the DB2 subsystems.

NOTE

If you are running the solution in ADVISOR mode, the operator must reply to the ALERT.
You can leave the values as they are, or you can change them. Table 16 on page 484 describes each variable.

**Customizing the subsystem variables**

The second set of variables in the RID Pool Solution section are the subsystem variables. These variables are optional. If you specify them, they affect only the specified subsystem. Subsystem specific values override default values.

- To specify subsystem variables, replace #### in the variable names and REXX statements with the DB2 subsystem ID that you want the values to affect.

- To specify values for additional subsystems, copy the variables and the REXX statements, paste them after the existing statements, and change the DB2 subsystem ID.

**Global and subsystem variable definitions**

Table 16 lists and describes variables that are used in the RID pool solution.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Default global value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_RIDPOOL_MODE.*</td>
<td>mode in which you want to run the solution</td>
<td>ADVISOR</td>
</tr>
<tr>
<td></td>
<td>Specify ADVISOR or REPAIR. See “Available modes” on page 467 for more information.</td>
<td></td>
</tr>
<tr>
<td>DT_RIDPOOL_LIMIT.*</td>
<td>number of times that the solution will run</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>For example, if you set this to 1, the solution will execute the OPERTUNE RIDPOOL element command up to one time. The solution will not execute the command a second time.</td>
<td></td>
</tr>
<tr>
<td>DT_RIDPOOL_PERCENT.*</td>
<td>percentage by which the solution increases the size of the RID pool</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Each time the solution runs, the pool size is increased by this percentage.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For example, you set the percentage to 10. Originally, there is 10000 KB of storage. The first time the solution runs, the pool is increased by 1000 KB to 11000 KB. The second time the solution runs, the buffer is increased by 1100 KB to 12100 KB.</td>
<td></td>
</tr>
</tbody>
</table>

In the variable name, replace * with one of the following values:

- $ALL to specify global values
- a DB2 subsystem ID to specify subsystem variables
Data set utilization solution

The data set utilization solution detects excessive data set close activity and increases the number of data sets that can be open at the same time.

How the solution works

The data set utilization solution works in the following way:

1. MAINVIEW monitors for excessive data set close activity.
2. When data set utilization reaches 85%, MAINVIEW notifies AutoOPERATOR to execute the data set utilization solution.
3. AutoOPERATOR issues an ALERT.
4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the data set utilization solution issues a MAXDSN element command to increase the number of data sets that can be open at the same time.

The number is increased by the percentage that you specified in QDTINIT1.

For more information about the MAXDSN element command, see “MAXDSN—Maximum number of open data sets” on page 158.

What to customize in QDTINIT1

The Data Set Utilization Solution section in QDTINIT1 contains two sets of variables that you can customize—global and subsystem.

The global variables are required. The subsystem variables are optional.

Customizing the global variables

The first set of variables in the Data Set Utilization Solution section are the global variables. These variables are required and contain default values.

The values that are specified for the global variables affect all of the DB2 subsystems.
You can leave the values as they are, or you can change them. Table 17 on page 486 describes each variable.

**Customizing the subsystem variables**

The second set of variables in the Data Set Utilization Solution section are the subsystem variables. These variables are optional. If you specify them, they affect only the specified subsystem. Subsystem specific values override default values.

To specify subsystem variables, replace #### in the variable names and REXX statements with the DB2 subsystem ID that you want the values to affect.

To specify values for additional subsystems, copy the variables and the REXX statements, paste them after the existing statements, and change the DB2 subsystem ID.

**Global and subsystem variable definitions**

Table 17 lists and describes the variables that are used in the data set utilization solution.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Default global values</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_MAXDSN_MODE.*</td>
<td>Mode in which you want to run the solution</td>
<td>ADVISOR</td>
</tr>
<tr>
<td></td>
<td>Specify ADVISOR or REPAIR. See “Available modes” on page 467 for more information.</td>
<td></td>
</tr>
<tr>
<td>DT_MAXDSN_LIMIT.*</td>
<td>Number of times the solution will run</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>For example, if you set this to 9, the solution will execute the OPERTUNE MAXDSN element command up to nine times. The solution will not execute the command a tenth time.</td>
<td></td>
</tr>
<tr>
<td>DT_MAXDSN_PERCENT.*</td>
<td>Percentage by which the solution increases the number of data sets that can be open at the same time</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Each time the solution runs, the number is increased by this percentage.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For example, you set the percentage to 10. Originally, 200 data sets can be open. The first time that the solution runs, the number is increased by 20 to 220 data sets. The second time that the solution runs, the number is increased by 22 to 242 data sets.</td>
<td></td>
</tr>
</tbody>
</table>

In the variable name, replace * with one of the following values:
- $ALL to specify global values
- a DB2 subsystem ID to specify subsystem variables
Checkpoint solution

The checkpoint solution issues a DB2 checkpoint.

How the solution works

The checkpoint solution works in the following way:

1. MAINVIEW monitors for infrequent DB2 checkpoints.

2. When the last checkpoint taken occurred longer ago than a preset interval (for example, 20 minutes), MAINVIEW notifies AutoOPERATOR to execute the checkpoint solution.

3. AutoOPERATOR issues an ALERT.

4. If the operator replied YES to the ALERT or if you are running in REPAIR mode, the checkpoint solution executes the OPERTUNE CHECKPT operational assist to take a checkpoint.

   For more information about the CHECKPT operational assist, see “Initiate a subsystem checkpoint” on page 303.

What to customize in QDTINIT1

The Data Set Utilization Solution section in QDTINIT1 contains two sets of variables that you can customize—global and subsystem.

The global variables are required. The subsystem variables are optional.

Customizing the global variables

The first set of variables in the Checkpoint Solution section are the global variables. These variables are required and contain default values.

The values that are specified for the global variables affect all of the DB2 subsystems.

NOTE

If you are running the solution in ADVISOR mode, the operator must reply to the ALERT.
You can leave the values as they are, or you can change them. Table 18 on page 488 describes each variable.

**Customizing the subsystem variables**

The second set of variables in the Checkpoint Solution section are the subsystem variables. These variables are optional. If you specify them, they affect only the specified subsystem. Subsystem specific values override default values.

- To specify subsystem variables, replace #### in the variable names and REXX statements with the DB2 subsystem ID that you want the values to affect.

- To specify values for additional subsystems, copy the variables and the REXX statements, paste them after the existing statements, and change the DB2 subsystem ID.

**Global and subsystem variable definitions**

Table 18 lists and describes the variables that are used in the checkpoint solution.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Default global value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_CHECKPT_MODE.*</td>
<td>Mode in which you want to run the solution</td>
<td>ADVISOR</td>
</tr>
<tr>
<td>DT_CHECKPT_LIMIT.*</td>
<td>Number of times the solution will run</td>
<td>0</td>
</tr>
</tbody>
</table>

In the variable name, replace * with one of the following values:
- $ALL to specify global values
- a DB2 subsystem ID to specify subsystem variables
AutoOPERATOR messages

This section contains messages that are issued by AutoOPERATOR when you use the solutions that are described in this appendix.

DT0001I - QDTINITV has completed.

Explanation: QDTINITV completed processing.
System action: None.
User response: None.

DT0001I - QDTINIT1 has completed.

Explanation: QDTINIT1 completed processing.
System action: None.
User response: None.

DT0100I ALERT alertNumber DELETE completed with rc= 0

Explanation: The specified ALERT was deleted successfully.
System action: None.
User response: None.

DT0100I OPERTUNE COMMAND ISSUED ssid IN(DB2ssid) SET MAXTHDS(+pp%)

Explanation: The OPERTUNE MAXTHDS element command was issued to DB2 subsystem DB2ssid. The number of threads that are available was increased pp percent.
System action: None.
User response: None.

DT0101I OPERTUNE COMMAND RETURN CODE OK

Explanation: The OPERTUNE MAXTHDS element command was completed successfully.
System action: None.
User response: None.

DT0102E Load for OPERTUNE Command module has failed.

Explanation: The OPERTUNE command module was not found.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0102E OPERTUNE is not active. Return code 807.

Explanation: The OPERTUNE command module could not locate OPERTUNE.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

DT0102E OPERTUNE not found. Return code 831.

Explanation: The OPERTUNE MAXTHDS element command was not completed successfully.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0103I ssid Subsystem MAXTHDS_n Limit of nn has occurred.

Explanation: The limit that you specified in the thread solution was reached. The limit is set by using the DT_MAXTHDS_LIMIT variable in QDTINIT1. The limit controls the number of times that the thread solution runs.
System action: None.
User response: None. You can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

DT0104I ssid Subsystem Alert for MAXTHDS_n issued.

Explanation: The mode that you specified in the thread solution is set to ADVISOR. The mode is set by using the DT_MAXTHDS_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue the OPERTUNE MAXTHDS element command.
System action: An ALERT is added to the AutoOPERATOR ALERT queue.
User response: To issue the OPERTUNE MAXTHDS element command, respond YES to the ALERT; otherwise, you can delete the ALERT.

DT0105I RC from IMFEXEC ALERT = returnCode.

Explanation: The return code from IMFEXEC was not zero.
System action: An ALERT is not issued.
User response: The return code description is in AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.
DT0200I ALERT alertNumber DELETE completed with rc= 0

Explanation: The specified ALERT was deleted successful.
System action: None.
User response: None.

DT0200I OPERTUNE COMMAND ISSUED ssid IN(ssid) SET ADDLOG(dataSet1,dataSet2)

Explanation: The OPERTUNE ADDLOG operational assist was issued to DB2 subsystem DB2ssid. Active log copy 1 (dataSet1) and copy 2 (dataSet2) data sets were added.
System action: None.
User response: None.

DT0201I OPERTUNE COMMAND RETURN CODE OK

Explanation: The OPERTUNE ADDLOG operational assist was completed successfully.
System action: None.
User response: None.

DT0202E Load for OPERTUNE Command module has failed.

Explanation: The OPERTUNE command module was not found.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0202E OPERTUNE is not active. Return code 807.

Explanation: The OPERTUNE command module could not locate OPERTUNE.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

DT0202E OPERTUNE not found. Return code 831.

Explanation: The OPERTUNE ADDLOG operational assist was not completed successfully.
System action: The operational assist terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.
DT0203I ssid Subsystem ADDLOG Limit of $nn$ has occurred.

Explanation: The limit that you specified in the log data set solution was reached. The limit is set by using the DT_ADDLOG_LIMIT variable in QDTINIT1. The limit controls the number of times that the log data set solution runs.

System action: None.

User response: None. You can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

DT0204I ssid Subsystem Alert for ADDLOG issued.

Explanation: The mode that you specified in the log data set solution is set to ADVISOR. The mode is set by using the DT_ADDLOG_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue the OPERTUNE ADDLOG operational assist.

System action: An ALERT is added to the AutoOPERATOR ALERT queue.

User response: To issue the OPERTUNE ADDLOG operational assist, respond YES to the ALERT; otherwise, you can delete the ALERT.

DT0205I RC from IMFEXEC ALERT = returnCode.

Explanation: The return code from IMFEXEC was not zero.

System action: An ALERT is not issued.

User response: The return code description is in AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.

DT0300I ALERT alertNumber DELETE completed with rc= 0

Explanation: The specified ALERT was deleted successfully.

System action: None.

User response: None.

DT0300I OPERTUNE COMMAND ISSUED DB2ssid IN(ssid) SET OUTBUF(+pp%)

Explanation: The OPERTUNE OUTBUFF and LOGTHRSH element commands were issued to DB2 subsystem DB2ssid. The size of the log buffer and the wait threshold for the logs were increased $pp$ percent.

System action: None.

User response: None.

DT0301I OPERTUNE COMMAND RETURN CODE OK

Explanation: OPERTUNE OUTBUFF and LOGTHRSH element commands were completed successfully.
DT0302E Load for OPERTUNE Command module has failed.

Explanation: The OPERTUNE command module was not found.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0302E OPERTUNE is not active. Return code 807.

Explanation: The OPERTUNE command module could not locate OPERTUNE.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

DT0302E OPERTUNE not found. Return code 831.

Explanation: OPERTUNE OUTBUFF and LOGTHRSH element commands were not completed successfully.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0303I ssid Subsystem OUTBUF Limit of nn has occurred.

Explanation: The limit that you specified in the log buffer solution was reached. The limit is set by using the DT_OUTBUF_LIMIT variable in QDTINIT1. The limit controls the number of times the log buffer solution runs.
System action: None.
User response: None. You can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

DT0304I DB2ssid Subsystem Alert for OUTBUF issued.

Explanation: The mode that you specified in the log buffer solution is set to ADVISOR. The mode is set by using the DT_OUTBUF_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue OPERTUNE OUTBUFF and LOGTHRSH element commands.
System action: An ALERT is added to AutoOPERATOR ALERT queue.
User response: To issue the OPERTUNE MAXTHDS and LOGTHRSH element commands, respond YES to the ALERT; otherwise, you can delete the ALERT.

DT0305I RC from IMFEXEC ALERT = returnCode.

Explanation: The return code from IMFEXEC was not zero.
System action: An ALERT is not issued.
User response: The return code description is in AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.

DT0400I ALERT alertNumber DELETE completed with rc= 0

Explanation: The specified ALERT was deleted successfully.
System action: None.
User response: None.

DT0400I OPERTUNE COMMAND ISSUED DB2ssid IN(DB2ssid) SET EDMPOOL(+pp%)

Explanation: The OPERTUNE EDMPOOL element command was issued to the indicated DB2 subsystem. The size of the EDM pool was increased pp percent.
System action: None.
User response: None.

DT0401I OPERTUNE COMMAND RETURN CODE OK

Explanation: The OPERTUNE EDMPOOL element command was completed successfully.
System action: None.
User response: None.

DT0402E Load for OPERTUNE Command module has failed.

Explanation: The OPERTUNE command module was not found.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0402E OPERTUNE is not active. Return code 807.

Explanation: The OPERTUNE command module could not locate OPERTUNE.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

DT0402E OPERTUNE not found. Return code 831.

Explanation: The OPERTUNE EDMPOOL element command was not completed successfully.

System action: Command execution terminates with no action to the DB2 subsystem.

User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0403I DB2ssid Subsystem EDMPOOL Limit of nn has occurred.

Explanation: The limit that you specified in the EDM pool solution was reached. The limit is set by using the DT_EDMPOOL_LIMIT variable in QDTINIT1. The limit controls the number of times that the EDM pool solution runs.

System action: None.

User response: None. If you want to, you can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

DT0404I DB2ssid Subsystem Alert for EDMPOOL issued.

Explanation: The mode that you specified in the EDM pool solution is set to ADVISOR. The mode is set by using the DT_EDMPOOL_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue the OPERTUNE EDMPOOL element command.

System action: An ALERT is added to the AutoOPERATOR ALERT queue.

User response: To issue the OPERTUNE EDMPOOL element command, respond YES to the ALERT; otherwise, you can delete the ALERT.

DT0405I RC from IMFEXEC ALERT = returnCode.

Explanation: The return code from IMFEXEC was not zero.

System action: An ALERT is not issued.

User response: The return code description is in AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.

DT0500I ALERT alertNumber DELETE completed with rc= 0

Explanation: The specified ALERT was deleted successfully.

System action: None.

User response: None.
DT0500I OPERTUNE COMMAND ISSUED DB2ssid IN(DB2ssid) SET RIDPOOL(+pp%)

Explanation: The OPERTUNE RIDPOOL element command was issued to DB2 subsystem DB2ssid. The size of the RID pool was increased pp percent.

System action: None.

User response: None.

DT0501I OPERTUNE COMMAND RETURN CODE OK

Explanation: The OPERTUNE RIDPOOL element command was completed successfully.

System action: None.

User response: None.

DT0502E Load for OPERTUNE Command module has failed.

Explanation: The OPERTUNE command module was not found.

System action: Command execution terminates with no action to the DB2 subsystem.

User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0502E OPERTUNE is not active. Return code 807.

Explanation: The OPERTUNE command module could not locate OPERTUNE.

System action: Command execution terminates with no action to the DB2 subsystem.

User response: Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

DT0502E OPERTUNE not found. Return code 831.

Explanation: The OPERTUNE RIDPOOL element command was not completed successfully.

System action: Command execution terminates with no action to the DB2 subsystem.

User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0503I DB2ssid Subsystem RIDPOOL Limit of nn has occurred.

Explanation: The limit that you specified in the RID pool solution was reached. The limit is set by using the DT_RIDPOOL_LIMIT variable in QDTINIT1. The limit controls the number of times that the RID pool solution runs.

System action: None.
User response: None. If you want to, you can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

**DT0504I DB2ssid Subsystem Alert for RIDPOOL issued.**

*Explanation:* The mode that you specified in the RID pool solution is set to ADVISOR. The mode is set by using the DT_RIDPOOL_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue the OPERTUNE RIDPOOL element command.

*System action:* An ALERT is added to the AutoOPERATOR ALERT queue.

*User response:* To issue the OPERTUNE RIDPOOL element command, respond **YES** to the ALERT; otherwise, you can delete the ALERT.

**DT0505I RC from IMFEXEC ALERT = returnCode.**

*Explanation:* The return code from IMFEXEC was not zero.

*System action:* An ALERT is not issued.

*User response:* The return code description is in AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.

**DT0600I ALERT alertNumber DELETE completed with rc= 0**

*Explanation:* The specified ALERT was deleted successfully.

*System action:* None.

*User response:* None.

**DT0600I OPERTUNE COMMAND ISSUED DB2ssid IN(DB2ssid) SET MAXDSN(+pp%)**

*Explanation:* The OPERTUNE MAXDSN element command was issued to DB2 subsystem **DB2ssid**. The number of data sets that can be open at the same time was increased **pp** percent.

*System action:* None.

*User response:* None.

**DT0601I OPERTUNE COMMAND RETURN CODE OK**

*Explanation:* The OPERTUNE MAXDSN element command was completed successfully.

*System action:* None.

*User response:* None.

**DT0602E Load for OPERTUNE Command module has failed.**

*Explanation:* The OPERTUNE command module was not found.
**System action:** Command execution terminates with no action to the DB2 subsystem.

**User response:** Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

**DT0602E OPERTUNE is not active. Return code 807.**

**Explanation:** The OPERTUNE command module could not locate OPERTUNE.

**System action:** Command execution terminates with no action to the DB2 subsystem.

**User response:** Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

**DT0602E OPERTUNE not found. Return code 831.**

**Explanation:** The OPERTUNE MAXDSN element command was not completed successfully.

**System action:** Command execution terminates with no action to the DB2 subsystem.

**User response:** Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

**DT0603I DB2ssid Subsystem MAXDSN Limit of nn has occurred.**

**Explanation:** The limit that you specified in the data set utilization solution was reached. The limit is set by using the DT_MAXDSN_LIMIT variable in QDTINIT1. The limit controls the number of times that the data set utilization solution runs.

**System action:** None.

**User response:** None. You can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

**DT0604I DB2ssid Subsystem Alert for MAXDSN issued.**

**Explanation:** The mode that you specified in the data set utilization solution is set to ADVISOR. The mode is set by using the DT_MAXDSN_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue the OPERTUNE MAXDSN element command.

**System action:** An ALERT is added to the AutoOPERATOR ALERT queue.

**User response:** To issue the OPERTUNE MAXDSN element command, respond YES to the ALERT; otherwise, you can delete the ALERT.

**DT0605I RC from IMFEXEC ALERT = returnCode.**

**Explanation:** The return code from IMFEXEC was not zero.

**System action:** An ALERT is not issued.
User response: The return code description is in AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.

DT0700I ALERT alertNumber DELETE completed with rc= 0

Explanation: The specified ALERT was deleted successfully.
System action: None.
User response: None.

DT0700I OPERTUNE COMMAND ISSUED DB2ssid IN(DB2ssid) SET CHECKPT

Explanation: The OPERTUNE checkpoint operational assist was issued to the indicated DB2 subsystem. A checkpoint was issued.
System action: None.
User response: None.

DT0701I OPERTUNE COMMAND RETURN CODE OK

Explanation: The OPERTUNE checkpoint operational assist was completed successfully.
System action: None.
User response: None.

DT0702E Load for OPERTUNE Command module has failed.

Explanation: The OPERTUNE command module was not found.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

DT0702E OPERTUNE is not active. Return code 807.

Explanation: The OPERTUNE command module could not locate OPERTUNE.
System action: Command execution terminates with no action to the DB2 subsystem.
User response: Ensure that OPERTUNE is active on the same system as AutoOPERATOR.

DT0702E OPERTUNE not found. Return code 831.

Explanation: The OPERTUNE checkpoint operational assist was not completed successfully.
System action: The operational assist terminates with no action to the DB2 subsystem.
**User response:** Ensure that the OPERTUNE library is in the STEPLIB concatenation in the AutoOPERATOR procedure.

**DT0703I DB2ssid Subsystem CHECKPT Limit of nn has occurred.**

**Explanation:** The limit that you specified in the checkpoint solution was reached. The limit is set by using the DT_CHECKPT_LIMIT variable in QDTINIT1. The limit controls the number of times that the checkpoint solution runs.

**System action:** None.

**User response:** None. You can increase the limit in the QDTINIT1 REXX EXEC and execute the procedure again.

**DT0704I DB2ssid Subsystem Alert for CHECKPT issued.**

**Explanation:** The mode that you specified in the checkpoint solution is set to ADVISOR. The mode is set by using the DT_CHECKPT_MODE variable in QDTINIT1. ADVISOR mode requires operator confirmation to issue the OPERTUNE checkpoint operational assist.

**System action:** An ALERT is added to the AutoOPERATOR ALERT queue.

**User response:** To issue the OPERTUNE checkpoint operational assist, respond YES to the ALERT; otherwise, you can delete the ALERT.

**DT0705I RC from IMFEXEC ALERT = returnCode.**

**Explanation:** The return code from IMFEXEC was not zero.

**System action:** An ALERT is not issued.

**User response:** The return code description is in the AutoOPERATOR Advanced Automation Guide: REXX EXECs, with Function of ADD. If you require assistance, contact BMC Software Customer Support.
EXTENDED BUFFER MANAGER support

This appendix provides information about the interaction between OPERTUNE and BMC Software’s EXTENDED BUFFER MANAGER (XBM). This appendix is intended for OPERTUNE users who also have XBM installed.

This appendix includes the following topics:

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   Scheduling XBM commands . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 503
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Scheduling

You can use OPERTUNE to schedule the issuing of any XBM command to an XBM subsystem.

Activating and deactivating configurations and management sets

XBM allows you to change the storage types and sizes of the extended buffer dynamically by activating and deactivating configurations. XBM also allows you to change the objects cached in the extended buffer dynamically by activating and deactivating management sets.

You can use OPERTUNE to schedule the activation of configurations and the activation and deactivation of management sets.

Example

Assume you have a table that has varying, but predictable activity over different time periods. The table may be accessed heavily from 8 A.M. to noon, moderately from noon until 5 P.M., and sporadically during evening and night. You can create three object definitions for the table in three different management sets—one for the morning shift, one for the afternoon shift, and one for evening and night shifts. Each definition reflects the storage and priority needs of the table at the given time period.

You create three management sets:

- MSAM1
- MSPM1
- MSPM2

During the morning and afternoon, when the table space access is heavy to moderate, you want to cache the entire table space; but in the evening, during your batch window, you want to cache only 25% of the table space. You create two configurations:

- CFGAMPM allocates a cache large enough to cache the entire table space.
- CFGPM allocates a cache large enough to cache only 25% percent of the table space.

You can use OPERTUNE to schedule the activation of configurations CFGAMPM and CFGPM and the activation and deactivation of MSAM1, MSPM1, and MSPM2.
You can schedule the following XBM commands:

08:00 A.M. XBM ACTIVATE CONFIGURATION CFGAMPM
08:00 A.M. XBM ACTIVATE MANAGEMENT SET MSAM1
12:00 P.M. XBM DEACTIVATE MANAGEMENT SET MSAM1
12:00 P.M. XBM ACTIVATE MANAGEMENT SET MSPM1
05:00 P.M. XBM ACTIVATE CONFIGURATION CFGPM
05:00 P.M. XBM DEACTIVE MANAGEMENT SET MSPM1
05:00 P.M. XBM ACTIVATE MANAGEMENT SET MSPM2

Scheduling XBM commands

You can issue XBM commands through the OPERTUNE Free Form Command panel (see “Free form commands” on page 305) or combine XBM commands into a group (see Chapter 5, “Group profiles”) and submit the group automatically as a schedule (see Chapter 6, “Schedule profiles”).

Commands

Using OPERTUNE, you can issue the following XBM commands:

**ACTIVATE command**

Use the ACTIVATE command to activate configurations, management sets, and groups.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The XBM subsystem ID. Wildcards are allowed.*</td>
</tr>
<tr>
<td>CONFIGURATION</td>
<td>The object to be activated is a configuration</td>
</tr>
<tr>
<td>MANAGEMENT SET</td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td></td>
</tr>
<tr>
<td>GROUP</td>
<td></td>
</tr>
<tr>
<td>name</td>
<td>The name of the configuration to be activated. There can be only one active configuration in an XBM subsystem. If you activate a configuration, the previously active configuration is deactivated.</td>
</tr>
</tbody>
</table>
DEACTIVATE command

Use the DEACTIVATE command to deactivate Management Sets and groups.

```
ssid  DEACTIVATE  MANAGEMENT SET  MS  GROUP  *  name
```

Command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The XBM subsystem ID. Wildcards are allowed.*</td>
</tr>
<tr>
<td>MANAGEMENT SET MS</td>
<td>The object to be deactivated is a management set.</td>
</tr>
<tr>
<td>GROUP</td>
<td>The object to be deactivated is a group.</td>
</tr>
<tr>
<td>*</td>
<td>All management sets or groups in the repository are deactivated.</td>
</tr>
<tr>
<td>name</td>
<td>The name of the management set or group to be deactivated. Wildcards are allowed.*</td>
</tr>
</tbody>
</table>

*The following wildcards are allowed:
- Use the question mark (?) to replace a single character at any position in the name
- Use the asterisk (*) at the end of a character string to match all names beginning with that character string. Characters following an asterisk are ignored.*
DISPLAY command

Use the DISPLAY command to display the status of management sets, groups, the component, and the active configuration. You can also use DISPLAY to determine the version of XBM that you have installed.

**NOTE**
The DISPLAY command cannot be used on the snapshot component.

---

### Command Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The XBM subsystem ID. Wildcards are allowed.*</td>
</tr>
<tr>
<td>XBM</td>
<td>The following information is displayed:</td>
</tr>
<tr>
<td></td>
<td>- version of XBM that is installed</td>
</tr>
<tr>
<td></td>
<td>- status of components</td>
</tr>
<tr>
<td></td>
<td>- name of the active configuration</td>
</tr>
<tr>
<td></td>
<td>- names of all management sets</td>
</tr>
<tr>
<td></td>
<td>- names of all active groups</td>
</tr>
<tr>
<td>COMPONENT</td>
<td>The status of the component is displayed.</td>
</tr>
<tr>
<td>MANAGEMENT SET MS</td>
<td>The status of the management set or sets is displayed.</td>
</tr>
<tr>
<td>GROUP</td>
<td>The status of the group or groups is displayed.</td>
</tr>
<tr>
<td>*</td>
<td>The status of the component or the status of all management sets or groups is displayed.</td>
</tr>
<tr>
<td>name</td>
<td>Specify the name of the component, management set or group to be displayed. Wildcards are allowed.*</td>
</tr>
</tbody>
</table>

*The following wildcards are allowed:*
- Use the question mark (?) to replace a single character at any position in the name
- Use the asterisk (*) at the end of a character string to match all names beginning with that character string. Characters following an asterisk are ignored.
PING command

Use the PING command to display the status of the XBM subsystems on a CPU. The PING command can be sent by the ROUTE command (page 507) to display the status of all XBM subsystems in a data sharing group.

If the PSS component is inactive you can PING only the XBM subsystem processing the command.

```
$ ssid $ PING
```

RESETSTA command

Use the RESETSTA command to reset the statistics for management sets, groups, and data sets.

**NOTE**
The RESETSTA command cannot be used on the snapshot component.

```
$ ssid $ RESETSTA
```

Command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The subsystem ID of the XBM Wildcards are allowed.*</td>
</tr>
<tr>
<td>MANAGEMENT SET MS</td>
<td>The management set statistics are reset.</td>
</tr>
<tr>
<td>GROUP</td>
<td>The group statistics are reset.</td>
</tr>
<tr>
<td>DATASET DSN</td>
<td>The data set statistics are reset.</td>
</tr>
<tr>
<td>*</td>
<td>Statistics are reset for all management sets, groups, or data sets.</td>
</tr>
</tbody>
</table>
ROUTE command

Use the ROUTE command to send commands to one or more XBM subsystems in the same data sharing group.

NOTE

If the PSS Component is inactive, you can only ROUTE to the XBM subsystem processing the command.

Command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The subsystem ID of the XBM from which the ROUTE command will be issued. Wildcards are allowed.*</td>
</tr>
<tr>
<td>xbm-group</td>
<td>Issue the ROUTE command from any XBM in the data sharing group.</td>
</tr>
<tr>
<td></td>
<td>The command is routed from any XBM subsystem residing on the OS/390 subsystem where the command is issued. The xbm-group name must be at least five characters in length. Otherwise, XBM treats this name as an XBM subsystem ID.</td>
</tr>
<tr>
<td>*</td>
<td>Route the command to all XBM subsystems in the data-sharing group</td>
</tr>
<tr>
<td>name</td>
<td>Specify the name of the XBM subsystem to which to route the command. Wildcards are allowed.*</td>
</tr>
<tr>
<td></td>
<td>■ Use the question mark (?) to replace a single character at any position in the name</td>
</tr>
<tr>
<td></td>
<td>■ Use the asterisk (*) at the end of a character string to match all names beginning with that character string. characters following an asterisk are ignored.</td>
</tr>
</tbody>
</table>
Use the SET SIMULATE command to turn off the XBM simulate mode. In simulate mode, XBM does not satisfy DB2 read requests from the Extended Buffer.

```
xbm-ssid  SET SIMULATE  OFF
```

**Command parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>xbm-ssid</code></td>
<td>The XBM subsystem ID. Wildcards are allowed:</td>
</tr>
<tr>
<td></td>
<td>- Use the question mark (?) to replace a single character at any position in the name</td>
</tr>
<tr>
<td></td>
<td>- Use the asterisk (*) at the end of a character string to match all values beginning with that character string. Characters following an asterisk are ignored.</td>
</tr>
<tr>
<td>OFF</td>
<td>Simulate mode is turned off in the active configuration. The simulate mode setting specified in the configuration file in the XBM repository is not changed.</td>
</tr>
</tbody>
</table>
START COMPONENT command

Use the START COMPONENT command to start the XBM component.

**NOTE**

The START command cannot be used on the snapshot component.

Command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The XBM subsystem ID. Wildcards are allowed.*</td>
</tr>
<tr>
<td>*</td>
<td>The XBM component is started.</td>
</tr>
<tr>
<td>name</td>
<td>Specify the name of the component to be started. Wildcards are allowed.*</td>
</tr>
</tbody>
</table>

*The following wildcards are allowed:
- Use the question mark (?) to replace a single character at any position in the name
- Use the asterisk (*) at the end of a character string to match all values beginning with that character string. Characters following an asterisk are ignored.

STOP command

Use the STOP command to stop the XBM subsystem or to stop the XBM component.

**NOTE**

The STOP command cannot be used on the snapshot component.
## Command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssid</td>
<td>The subsystem ID of the XBM. Wildcards are allowed.*</td>
</tr>
<tr>
<td>XBM</td>
<td>The XBM subsystem identified by ssid is stopped.</td>
</tr>
<tr>
<td>FORCE</td>
<td>The specified XBM subsystem is terminated immediately, regardless of the jobs it might be supporting. FORCE can be issued only against an XBM subsystem; however, issuing FORCE against an XBM subsystem also stops the components on that subsystem.</td>
</tr>
<tr>
<td>COMPONENT</td>
<td>The specified XBM component is stopped if no busy condition exists (such as a currently active snapshot job). If a busy condition exists, XBM does not process the command but issues error messages that explain why the component could not be stopped.</td>
</tr>
<tr>
<td>name</td>
<td>The name of the XBM component to be stopped. Wildcards are allowed.*</td>
</tr>
</tbody>
</table>

*The following wildcards are allowed:

- Use the question mark (?) to replace a single character at any position in the name
- Use the asterisk (*) at the end of a character string to match all values beginning with that character string. Characters following an asterisk are ignored.*
OPERTUNE element cross reference

This section describes corresponding DB2 parameters that each OPERTUNE for DB2 element affects. The parameters are presented in tables that show the elements ordered by element name, installation panel, CLIST parameter, ZPARM macro, and ZPARM parameter.

Element name

Table 19 provides a cross reference of OPERTUNE elements, ordered by element name.

<table>
<thead>
<tr>
<th>OPERTUNE element</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABEXP</td>
<td>DSNTIPO</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>ABEXP</td>
</tr>
<tr>
<td>ABIND</td>
<td>DSNTIPO</td>
<td>ABIND</td>
<td>DSN6SPRM</td>
<td>ABIND</td>
</tr>
<tr>
<td>ACCESS</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>ACCUMACCa</td>
<td>DSNTIPN</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>ACCUMACC</td>
</tr>
<tr>
<td>ACCUMUIDa</td>
<td>DSNTIPN</td>
<td>none</td>
<td>DSN6SYSP</td>
<td>ACCUMUID</td>
</tr>
<tr>
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<td>DSNTIPP</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>AEXITLIM</td>
</tr>
<tr>
<td>ARC2FRST</td>
<td>DSNTIPO</td>
<td>ARC2FRST</td>
<td>DSN6LOGP</td>
<td>ARC2FRST</td>
</tr>
<tr>
<td>ARCALLOC</td>
<td>DSNTIPA</td>
<td>none</td>
<td>DSN6ARVP</td>
<td>PRIQTY</td>
</tr>
<tr>
<td>ARCLKSZ</td>
<td>DSNTIPA</td>
<td>ARCHSIZE</td>
<td>DSN6ARVP</td>
<td>SECQTY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ALCUNIT</td>
</tr>
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<td>OPERTUNE</td>
<td>Installation panel</td>
<td>CLIST parameter</td>
<td>ZPARM macro</td>
<td>ZPARAM parameter</td>
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<tr>
<td>-----------</td>
<td>--------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>ARCBSDS</td>
<td>DSNTIPA</td>
<td>ARCHMAXV</td>
<td>DSN6LOGP</td>
<td>MAXARCH</td>
</tr>
<tr>
<td>ARCCATLG</td>
<td>DSNTIPA</td>
<td>ARCHCTLG</td>
<td>DSN6ARVP</td>
<td>CATALOG</td>
</tr>
<tr>
<td>ARCCOMP</td>
<td>DSNTIPA</td>
<td>ARCHCOMP</td>
<td>DSN6ARVP</td>
<td>COMPACT</td>
</tr>
<tr>
<td>ARCHIVE</td>
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<td>none</td>
<td>DSN6LOGP</td>
<td>OFFLOAD</td>
</tr>
<tr>
<td>ARCPREF</td>
<td>DSNTIPH</td>
<td>ARCHPRE1</td>
<td>DSN6ARVP</td>
<td>ARCPFX1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ARCHPRE2</td>
<td></td>
<td>ARCPFX2</td>
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<td>PROTARAC</td>
<td>DSN6ARVP</td>
<td>PROTECT</td>
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<td>ARCHDEVT</td>
<td>DSN6ARVP</td>
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</tr>
<tr>
<td>ARCWUTOR</td>
<td>DSNTIPA</td>
<td>ARCHWTOR</td>
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</tr>
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<tr>
<td></td>
<td>DSNTIP2</td>
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<td></td>
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</tr>
</tbody>
</table>

BP<sub>n</sub>  
- 0 to 49 (4-KB buffers)  
- 8K to 8K9 (8-KB buffers)  
- 16K0 to 16K9 (16-KB buffers)  
- 32K to 32K9 (32-KB buffers)  

<table>
<thead>
<tr>
<th>OPERTUNE</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARAM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACHEDYN</td>
<td>DSNTIP8</td>
<td>CACHEDYN</td>
<td>DSN6SPRM</td>
<td>CACHEDYN</td>
</tr>
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<td>DSN6SPRC</td>
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</tr>
<tr>
<td>CDSSRDEF</td>
<td>DSNTIP8</td>
<td>CDSSRDEF</td>
<td>DSN6SPRM</td>
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<tr>
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<td>DSNTIPB</td>
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<td>DSN6SPRM</td>
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</tr>
<tr>
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<td>DSNT IPL</td>
<td>OPCHKFRQ</td>
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</tr>
<tr>
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<td>SPRMCO1</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
<tr>
<td>CONTSTOR</td>
<td>DSNTIPE</td>
<td>CONTSTOR</td>
<td>DSN6SPRM</td>
<td>CONTSTOR</td>
</tr>
<tr>
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<td>DSNTIPK</td>
<td>COORDNTR</td>
<td>DSN6GRP</td>
<td>COORDNTR</td>
</tr>
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<td>none</td>
<td>SPRMCO2</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
<tr>
<td>COTIMINT</td>
<td>none</td>
<td>SPRMSCT</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
<tr>
<td>DBACRVW</td>
<td>DSNTIPP</td>
<td>SPRMCRVW</td>
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</tr>
<tr>
<td>DBPROTCL</td>
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</tr>
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</tr>
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<td>SPRMQCT</td>
<td>DSN6SPRC</td>
<td>none</td>
</tr>
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</tr>
<tr>
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<td>DSN6SPRM</td>
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<td>DSNTIP4</td>
<td>DESSTAT</td>
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<td>DESSTAT</td>
</tr>
<tr>
<td>DISABSCL&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIJUZ</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>DISABSCL</td>
</tr>
</tbody>
</table>
### Table 19   OPERTUNE elements by element name (part 3 of 6)

<table>
<thead>
<tr>
<th>OPERTUNE element</th>
<th>Installation panel</th>
<th>CLIST parameter</th>
<th>ZPARM macro</th>
<th>ZPARM parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLDFREQ</td>
<td>DSNTIPL</td>
<td>DLDFREQ</td>
<td>DSN6SYSOP</td>
<td>DLDFREQ</td>
</tr>
<tr>
<td>DLITOUT</td>
<td>DSNTIP1</td>
<td>DLITOUT</td>
<td>DSN6SPRM</td>
<td>DLITOUT</td>
</tr>
<tr>
<td>DSSTIME&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SYSOP</td>
<td>DSSTIME</td>
</tr>
<tr>
<td>DSVCI&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIP7</td>
<td>none</td>
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<td>DSVCI</td>
</tr>
<tr>
<td>DUALARC</td>
<td>DSNTIPH</td>
<td>ARCHTWO</td>
<td>DSN6LOGP</td>
<td>TWOARCH</td>
</tr>
<tr>
<td>EDMBFTI</td>
<td>DSNTIP8</td>
<td>SPRMEBF</td>
<td>DSN6SPRM</td>
<td>EDMBFTI</td>
</tr>
<tr>
<td>EDMDBDC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIPC</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDMDBDC</td>
</tr>
<tr>
<td>EDMDSAPAC&lt;sup&gt;b&lt;/sup&gt;</td>
<td>DSNTIPC</td>
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<td>DSN6SPRM</td>
<td>EDMDSAPAC</td>
</tr>
<tr>
<td>EDMPOOL</td>
<td>DSNTIPC</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDMPOOL</td>
</tr>
<tr>
<td>EDMSKPOL&lt;sup&gt;c&lt;/sup&gt;</td>
<td>DSNTIPC</td>
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<td>DSN6SPRM</td>
<td>EDM_SKELETON_POOL</td>
</tr>
<tr>
<td>EDMSTMTC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIPC</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDMSTMTC</td>
</tr>
<tr>
<td>EDPROP&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIPB</td>
<td>none</td>
<td>DSN6SPRM</td>
<td>EDPROP</td>
</tr>
<tr>
<td>EVALUNC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>DSNTIP8</td>
<td>EVALUNC</td>
<td>DSN6SPRM</td>
<td>EVALUNC</td>
</tr>
<tr>
<td>EXPLAIN&lt;sup&gt;+&lt;/sup&gt;&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>none</td>
<td>DSN6SPRC</td>
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</tr>
<tr>
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<td>DSNTIP5</td>
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<td>DSNTIPR</td>
<td>EXTSEC</td>
<td>DSN6SYSOP</td>
<td>EXTSEC</td>
</tr>
<tr>
<td>GBP&lt;sub&gt;n&lt;/sub&gt;;  &lt;br&gt;  n= 0 to 49 (4-KB buffers)  &lt;br&gt;  8K0 to 8K9 (8-KB buffers)  &lt;br&gt;  16K0 to 16K9 (16-KB buffers)  &lt;br&gt;  32K to 32 K9 (32-KB buffers)</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>IDTHTOIN</td>
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<td>DSN6FAC</td>
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</tr>
<tr>
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<td>IDXBPOOL</td>
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<tr>
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<td>DSNTIP8</td>
<td>none</td>
<td>DSN6GRP</td>
<td>IMMEDWRI</td>
</tr>
<tr>
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</tr>
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<td>IMPTSCMP&lt;sup&gt;c&lt;/sup&gt;</td>
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</tr>
<tr>
<td>IXQTY&lt;sup&gt;a&lt;/sup&gt;</td>
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</tr>
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GBP<sub>n</sub>;  n= 0 to 49 (4-KB buffers)  
8K0 to 8K9 (8-KB buffers)  
16K0 to 16K9 (16-KB buffers)  
32K to 32 K9 (32-KB buffers)
<table>
<thead>
<tr>
<th>OPERTUNE element</th>
<th>Installation panel</th>
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Table 19  OPERTUNE elements by element name (part 6 of 6)

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a  This element applies only to DB2 8.1 and later releases.

b  This element applies only to DB2 7.1 releases.

c  This element applies only to DB2 9.1 and later releases.
Table 20 provides a cross reference of OPERTUNE elements, ordered by installation panel.

Table 20  OPERTUNE elements by installation panel (part 1 of 6)

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Table 20  OPERTUNE elements by installation panel (part 6 of 6)

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\(^a\) This element applies only to DB2 8.1 and later releases.
\(^b\) This element applies only to DB2 9.1 and later releases.
\(^c\) This element applies only to DB2 7.1.

CLIST parameter

Table 21 provides a cross reference of OPERTUNE elements, ordered by CLIST parameter.

Table 21  OPERTUNE elements by CLIST parameter (part 1 of 6)

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Table 21  OPERTUNE elements by CLIST parameter (part 3 of 6)

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## Table 21  OPERTUNE elements by CLIST parameter (part 4 of 6)

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### Table 21  OPERTUNE elements by CLIST parameter (part 5 of 6)

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8K to 8K9 (8-KB buffers)
16K0 to 16K9 (16-KB buffers)
32K to 32K9 (32-KB buffers) | none | none | none |
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|                | REFSHAGE\(^b\)  | DSNTIP8            | DSN6SPRM    | REFSHAGE        |
|                | RLFERR          | DSNTIPO            | DSN6SYS     | RLFERR          |
|                | RLFERRD         | DSNTIPR            | DSN6FAC     | RLFERRD         |
|                | RLIMIT          | none               | none        | none            |
|                | SARGSWRP        | DSNTIPR            | DSN6SPRM    | SARGSWRP        |
|                | SITETYPE        | DSNTIPO            | DSN6SPRM    | SITETYPE        |
|                | SJMXPOOL        | DSNTIPB            | DSN6SPRM    | STARJOIN        |
|                | SJTABLES        | none               | DSN6SPRM    | SJTABLES        |
|                | SKIPUNCI\(^b\)  | DSNTIPB            | DSN6SPRM    | SKIPUNCI        |
|                | SMF89\(^b\)     | DSNTIPB            | DSN6FAC     | SMF89           |
|                | STARJOIN\(^b\)  | DSNTIPB            | DSN6SPRM    | STARJOIN        |
|                | STATSINT        | DSNTIPO            | DSN6SPRM    | STATSINT        |
|                | SVOLARC         | DSNTIPO            | DSN6ARVP    | SVOLARC         |
|                | TCPKPALV\(^b\)  | DSNTIPO            | DSN6FAC     | TCPKPALV        |
|                | TSQTY\(^b\)     | DSNTIPB            | DSN6SYS     | TSQTY           |
|                | UIFCIDSB        | DSNTIPB            | DSN6SPRM    | UIFCIDSB        |
|                | UNCOLNM7\(^b\)  | DSNTIPB            | DSN6SPRM    | UNION_COLNAME_7 |
|                | VOLTDEVT\(^b\)  | DSNTIPO            | DSN6SPRM    | VOLTDEVT        |

\(^a\) This element applies only to DB2 7.1 and earlier releases.

\(^b\) This element applies only to DB2 8.1 and later releases.

\(^c\) This element applies only to DB2 9.1 and later releases.
Table 22 provides a cross reference of OPERTUNE elements, ordered by ZPARM macro.

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Table 23 provides a cross reference of OPERTUNE elements, ordered by ZPARM parameter.

Table 23  OPERTUNE elements by ZPARM parameter (part 1 of 6)

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### Table 23  OPERTUNE elements by ZPARM parameter (part 3 of 6)

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## Table 23  OPERTUNE elements by ZPARM parameter (part 4 of 6)

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### Table 23  OPERTUNE elements by ZPARM parameter (part 6 of 6)

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<th>Installation panel</th>
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- **BP<sub>n</sub>**  
  - 0 to 49 (4-KB buffers)  
  - 8K0 to 8K9 (8-KB buffers)  
  - 16K0 to 16K9 (16-KB buffers)  
  - 32K to 32K9 (32-KB buffers)

- **CATTBUPD**  
  - Installation panel: none  
  - CLIST parameter: SPRMCTU  
  - ZPARM macro: DSN6SPRC

- **COMAXXPAG**  
  - Installation panel: none  
  - CLIST parameter: SPRMCO1  
  - ZPARM macro: DSN6SPRC

- **CORVRSTH**  
  - Installation panel: none  
  - CLIST parameter: SPRMCO2  
  - ZPARM macro: DSN6SPRC

- **COTIMINT**  
  - Installation panel: none  
  - CLIST parameter: SPRMSCT  
  - ZPARM macro: DSN6SPRC

- **DDFINTV**  
  - Installation panel: none  
  - CLIST parameter: SPRMINT  
  - ZPARM macro: DSN6SPRC

- **DDFQCTM**  
  - Installation panel: none  
  - CLIST parameter: SPRMQCT  
  - ZPARM macro: DSN6SPRC

- **DDFRBS**  
  - Installation panel: none  
  - CLIST parameter: SPRMDRB  
  - ZPARM macro: DSN6SPRC

- **EXPLAIN+b**  
  - Installation panel: none  
  - CLIST parameter: none  
  - ZPARM macro: DSN6SPRC

- **GBP<sub>n</sub>; **  
  - 0 to 49 (4-KB buffers)  
  - 8K0 to 8K9 (8-KB buffers)  
  - 16K0 to 16K9 (16-KB buffers)  
  - 32K to 32K9 (32-KB buffers)

- **IRLMECSA**  
  - Installation panel: DSNTIPJ  
  - CLIST parameter: IRLMMCSA  
  - ZPARM macro: none

- **MAXZDES**  
  - Installation panel: none  
  - CLIST parameter: SPRMMDE  
  - ZPARM macro: DSN6SPRC

- **MSGLIMIT**  
  - Installation panel: none  
  - CLIST parameter: none  
  - ZPARM macro: none

- **PFBP<sub>n</sub>; **  
  - 0 to 49 (4-KB buffers)  
  - 8K0 to 8K9 (8-KB buffers)  
  - 16K0 to 16K9 (16-KB buffers)  
  - 32K to 32K9 (32-KB buffers)

- **RLIMIT**  
  - Installation panel: none  
  - CLIST parameter: none  
  - ZPARM macro: none

---

<sup>a</sup> This ZPARM applies only to DB2 8.1 and later releases.

<sup>b</sup> This ZPARM applies only to DB2 7.1.

<sup>c</sup> This ZPARM applies only to DB2 9.1 and later releases.
Messages and codes

This appendix describes the messages issued by OPERTUNE, including an explanation of the message, the impact of the error, and suggested actions for error resolution.

Message syntax

The OPERTUNE profile name appears after the message number. The letter appearing at the end of each message number indicates the message type:

- **D**—Diagnostic. Issued upon request of BMC Software Customer Support.
- **E**—Error. Indicates that the function has not been performed.
- **I**—Informational. Supplies background information on function.
- **W**—Warning. Indicates that function has been only partially performed.

User abends

User abends issued by OPERTUNE are accompanied by an associated error message that can be referred to for an explanation of the error. The last three digits of the error message match the user abend issued. For example, U381 is accompanied by a 31381 message.
System messages

**BMC829**  
**SYSLMOD JFCB ERR (NO DD?)**

*Explanation:* The Table Link routine was invoked with a SYSLMOD request specifying a ddname. The JFCB for that ddname could not be read.

*System Action:* Processing terminates.

*User Response:* Verify that the SYSLIB DD statement is pointing to the correct library. If this message was received while running the CPUID utility online, verify that the library specified in the ISPF dialog is correct.

**BMC830**  
**NO SPACE IN DIRECTORY**

*Explanation:* There is not enough space in the directory of the data set being updated to allow another member to be added.

*System Action:* Processing terminates.

*User Response:* Verify that the library specified on the SYSLIB DD statement has sufficient directory space, and rerun the job.

**BMC899**  
**ALER=returnCode,DSNAME=pdsName**

*Explanation:* Dynamic allocation returned a non-zero code for the indicated data set.

*System Action:* Processing terminates.

*User Response:* Refer to the IBM *Job Management Manual* for a description of the error codes.

**OPERTUNE messages**

**BMC31000E**  
**UNKNOWN MESSAGE NUMBER (nnnnn) ENCOUNTERED**

*Explanation:* The message processor was given the indicated undefined message to issue.

*System Action:* None.

*User Response:* Contact BMC Software Customer Support for information about the undefined message number.
BMC31001E  OPERTUNE ALREADY ACTIVE IN THIS ASID

Explanation: An attempt was made to start a second OPERTUNE in the same address space.

System Action: The second OPERTUNE terminates.

User Response: If a second OPERTUNE is needed, start it in a separate address space.

BMC31002I  OPERTUNE Vv.r.mm, ASID(aaaa) - xxxxxxxx

Explanation: The initialization logic issues this message to indicate information about this OPERTUNE session. It indicates the version, release, and modification level of OPERTUNE.

System Action: Initialization continues.

User Response: None. Information only.

BMC31003E  ERROR ENCOUNTERED LOADING THE CSA RESIDENT ROUTINE

Explanation: An error occurred during an attempt to load the CSA resident subroutine module (DDTCSUBR). This module is vital to the system initialization process.

System Action: System initialization terminates.

User Response: Check for previous MVS messages that may lend additional information as to why the load failed. Ensure that the CSA resident load module is in a library accessible through the normal load sequence (STEPLIB/JOBLIB/LPALIB/LINKLIST).

BMC31004E  ERROR abendRC OCCURRED LOADING MODULE moduleName

Explanation: An error occurred during an attempt to load one of the system subroutine modules (moduleName). This module is vital to the system initialization process.

System Action: System initialization terminates.

User Response: Check the load abend and reason codes for a reason for the failure. Ensure that the requested load module is in a library accessible through the normal load sequence (STEPLIB/JOBLIB/LPALIB/LINKLIST).

BMC31005W  UNABLE TO LOCATE CDE FOR moduleName

Explanation: An error occurred during an attempt to locate the code for a previously loaded load module (moduleName). This is not vital for the performance of OPERTUNE, but it is used for diagnostic purposes.

System Action: None.

User Response: Contact BMC Software Customer Support to determine the cause of the error. This will enable the diagnostic facilities of OPERTUNE to function properly.
**BMC31006D** MODULE *moduleName* NOT FOUND ON LME CHAIN DURING DELETE

Explanation: An OPERTUNE load module control block could not be found during an attempt to delete load module (*moduleName*).

System Action: None.

User Response: Contact BMC Software Customer Support to determine the cause of the error. This will enable the diagnostic facilities of OPERTUNE to function properly.

**BMC31007W** DEQ FAILED (RC=returnCode) FOR RNAME *resource*

Explanation: An attempt was made to dequeue a DDT serialization resource, but the request failed with the indicated return code.

System Action: None.

User Response: Contact BMC Software Customer Support to determine the cause of the error.

**BMC31008E** INVALID KEYWORD (*keyword*) IN PARAMETERS

Explanation: The PARMS field on the EXEC statement contained an invalid keyword.

System Action: OPERTUNE terminates.

User Response: Check the invalid keyword against the list of valid keywords to determine how the keyword should be specified. Supply a valid keyword. Then restart OPERTUNE.

**BMC31009E** KEYWORD SPECIFIED MORE THAN ONCE (*keyword*)

Explanation: The PARMS field on the EXEC statement contained a keyword that was specified at least two times.

System Action: OPERTUNE terminates.

User Response: Change the parameter field to delete all occurrences of the keyword except the desired one. Then restart OPERTUNE.

**BMC31010E** SYSTEM NAME SPECIFIED (*name*) MUST BE FOUR CHARACTERS OR LESS

Explanation: The SYS keyword in the parameter field contained a system name that was more than four characters.

System Action: OPERTUNE terminates.

User Response: Change the system keyword value to that of a valid system profile name. Then restart OPERTUNE.
BMC31011E  *type* OPTION SPECIFIED (value) INVALID (YES OR NO)

*Explanation:* The keyword specified in the parameter field contained an invalid value. The only values allowed are YES and NO.

*System Action:* OPERTUNE terminates.

*User Response:* Change the debug keyword value to YES or NO. Then restart OPERTUNE.

BMC31013E  INVALID XDC MODULE SPECIFIED (moduleName)

*Explanation:* The XDC keyword in the parameter field contained an invalid module name.

*System Action:* OPERTUNE terminates.

*User Response:* Contact BMC Software Customer Support for the proper module name. Then restart OPERTUNE. Use this keyword only at the direction of BMC Software Customer Support.

BMC31017E  OPERTUNE FOR *type* PHASE 1 SECURITY CHECK FAILED RC=returnCode

*Explanation:* OPERTUNE product licensing logic detected a logic error during an attempt to verify the authority to use the product. *type* is DB2. Check the return code for the type of error.

*System Action:* OPERTUNE terminates.

*User Response:* Contact BMC Software Customer Support.

BMC31018E  SYSTEM IS ALREADY ACTIVE ON THIS PROCESSOR

*Explanation:* An active OPERTUNE using the same system name is already active on this MVS system. Each unique system profile can be simultaneously active only once for each MVS system.

*System Action:* OPERTUNE terminates.

*User Response:* Use the active OPERTUNE.

BMC31019I  INITIALIZATION COMPLETE

*Explanation:* OPERTUNE initialization logic has completed to the point where OPERTUNE will accept modification requests.

*System Action:* OPERTUNE waits for requests.

*User Response:* None.

BMC31020I  TERMINATED

*Explanation:* OPERTUNE termination logic has completed.

*System Action:* OPERTUNE terminates.

*User Response:* None.
BMC31021E  SYSTEM PROFILE NOT FOUND FOR opertunelD

Explanation: The system profile for the requested OPERTUNE was not found in the profile data set.

System Action: OPERTUNE terminates.

User Response: Change the SYS keyword value to that of a defined system or create a system profile for the requested system through the dialogs. Then restart OPERTUNE.

BMC31022W  PREVIOUS USE OF opertunelD WAS NOT PROPERLY TERMINATED

Explanation: The previous execution of the indicated OPERTUNE was not terminated with a SHUTDOWN command. This most likely indicates that the previous execution terminated as the result of an abend.

System Action: OPERTUNE continues to initialize.

User Response: Check the system log to determine whether the previous termination of this OPERTUNE was indeed caused by an abend. If so, contact BMC Software Customer Support to resolve the abend.

BMC31023I  USER EXIT name ACTIVATED

Explanation: OPERTUNE successfully loaded the indicated user exit and will begin using it.

System Action: OPERTUNE initialization continues.

User Response: None.

BMC31024E  NO LANGUAGES INSTALLED

Explanation: During initialization, OPERTUNE was unable to locate any of the language-specific modules.

System Action: OPERTUNE terminates.

User Response: Install one or more of the languages provided with OPERTUNE.

BMC31025E  OPERTUNE PRODUCT AUTHORIZATION TABLES NOT FOUND

Explanation: The OPERTUNE initialization routines were unable to locate the product authorization tables in a STEPLIB or LINKLIST library. These tables are required for the product to run.

System Action: OPERTUNE terminates.

User Response: Enter the licensing password for the DB2 product. If you entered the licensing password, ensure that the library name specified at the time you entered the password is in the product's STEPLIB or LINKLIST concatenation.

If you just upgraded from a version 1 release of OPERTUNE, you need to call your BMC Software Sales Representative to obtain a new password.
BMC31026I  ACTIVATING OPERTUNE FOR DB2

Explanation: This message is issued during OPERTUNE start up and in response to an ALTER ACTIVATE command. It signifies that the OPERTUNE system is checking for the existence of an OPERTUNE license for the DB2 product component.

System Action: The licensing software checks for the existence of a valid license. If there are any discrepancies, additional messages follow.

User Response: None.

BMC31027W  RESIDUAL STORAGE FREED, A=address, DATA=hex (text), TASK=name

Explanation: While terminating the indicated task, OPERTUNE found storage which had been explicitly obtained by the task but not freed.

System Action: The residual storage is freed.

User Response: Check the OPERTUNE job log for previous errors or abends. If none are found, contact BMC Software Customer Support to determine the cause of the error.

BMC31028E  EXPECTING field IN PARAMETERS, FOUND END OF PARMS

Explanation: While scanning the JCL parameters, the end of the parameters was encountered prematurely. The indicated field should have been specified.

System Action: OPERTUNE terminates.

User Response: Correct the JCL parameters to contain the indicated field, and restart OPERTUNE.

BMC31029E  EXPECTING field IN PARAMETERS, FOUND value

Explanation: While scanning the JCL parameters, an unexpected value was found instead of the indicated field.

System Action: OPERTUNE terminates.

User Response: Correct the JCL parameters to contain the proper field, and restart OPERTUNE.

BMC31030D  name COMPONENT INITIALIZED, RC=returnCode

Explanation: This debugging message indicates that the indicated component has completed initialization.

System Action: None.

User Response: None. Information only.
BMC31031D  name COMPONENT TERMINATED, RC=returnCode

Explanation: This debugging message indicates that the indicated component has completed termination.

System Action: None.
User Response: None. Information only.

BMC31033D  ACB ERROR, FUNCTION=OPEN, RC=8, ACBERROR=value

Explanation: An OPEN ACB was attempted. The ACBERROR value is the content of the ACBERROR field as provided by the SHOWCB macro. For ERROR designations, see the VTAM Programming Guide from IBM.

System Action: VTAM connection fails.
User Response: Use the ACBERROR code for guidance in correctly establishing a VTAM environment.

BMC31050E  UNSUCCESSFUL SDUMP ATTEMPT - reason

Explanation: During an attempt to take a system dump (SVC dump), an unsuccessful return code was returned from the SDUMP SVC. The reason indicates why the dump was unsuccessful.

System Action: OPERTUNE recovery continues to document the abend.
User Response: Contact BMC Software Customer Support to determine the cause of the abend.

BMC31051E  SDUMP SUCCESSFUL

Explanation: A system dump (SVC dump) was taken successfully to a SYS1.DUMP data set.

System Action: OPERTUNE recovery continues to document the abend.
User Response: Contact BMC Software Customer Support to determine the cause of the abend.

BMC31052E  PARTIAL SDUMP TAKEN

Explanation: A partial system dump (SVC dump) was taken to a SYS1.DUMP data set.

System Action: OPERTUNE recovery continues to document the abend.
User Response: Contact BMC Software Customer Support to determine the cause of the abend. Also, enlarge the SYS1.DUMP data set(s) to hold the entire dump.
BMC31053E  SDUMP NOT SUCCESSFUL - reason

Explanation: While attempting to take a system dump (SVC dump), an unsuccessful return code was returned from the SDUMP SVC. The reason indicates why the dump was unsuccessful.

System Action: OPERTUNE recovery continues to document the abend.

User Response: Contact BMC Software Customer Support to determine the cause of the abend.

BMC31054E  ERROR OCCURRED ATTEMPTING RECOVERY:

Explanation: While attempting to recover from a previous abend, the recovery routines encountered an unrecoverable abend. The messages following this message relate to the recovery routine’s abend.

System Action: OPERTUNE recovery continues to document the abend(s).

User Response: Contact BMC Software Customer Support to determine the cause of the abend(s).

BMC31055E  UNSOLICITED WORK REQUEST (request) RECEIVED FOR task

Explanation: An unexpected work request was received by an OPERTUNE task. This work request is never accepted by this task or is invalid.

System Action: The work request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the failure.

BMC31056E  UNSOLICITED WORK SUBTYPE (request, value) RECEIVED FOR task

Explanation: An unexpected work request of type request and subtype value was received by an OPERTUNE (task). This subtype is not valid for this task or is invalid.

System Action: The work request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the failure.

BMC31057I  DUMP TITLE=text

Explanation: This message indicates the title of an SVCDUMP dump. The title contains useful information regarding the cause of the error.

System Action: None.

User Response: None. Information only.
OPERTUNE messages

**BMC31060E**  
**text**

**Explanation:** This delimiting message indicates the beginning and end of the OPERTUNE abend diagnostic messages.

**System Action:** OPERTUNE recovery continues to document the abend.

**User Response:** Contact BMC Software Customer Support to determine the cause of the abend.

**BMC31061E**  
**BMC31061Emode: name TASK: task**

**Explanation:** This message indicates the OPERTUNE mode, name, and task that abended.

**System Action:** OPERTUNE recovery continues to document the abend.

**User Response:** Contact BMC Software Customer Support to determine the cause of the abend.

**BMC31062E**  
**VERSION: version**

**Explanation:** This message indicates the OPERTUNE product version.

**System Action:** OPERTUNE recovery continues to document the abend.

**User Response:** Contact BMC Software Customer Support to determine the cause of the abend.

**BMC31063E**  
**ABEND: code, LMOD: module, FUNC: function**

**Explanation:** This message indicates an abend. It also indicates the load module and function in which the abend occurred.

**System Action:** OPERTUNE recovery continues to document the abend.

**User Response:** Contact BMC Software Customer Support to determine the cause of the abend.

**BMC31064E**  
**CALLED BY - LMOD: module, FUNC: function**

**Explanation:** This message indicates the load module and function in the calling sequence leading to the abend.

**System Action:** OPERTUNE recovery continues to document the abend.

**User Response:** Contact BMC Software Customer Support to determine the cause of the abend.
BMC31065E  **SOURCE: module, MAINT: level**

*Explanation:* This message indicates the source module and maintenance level for the abending or calling module.

*System Action:* OPERTUNE recovery continues to document the abend.

*User Response:* Contact BMC Software Customer Support to determine the cause of the abend.

BMC31066E  **DISP: offset[, LINE#: number]**

*Explanation:* This message indicates the offset of the abending module and (optionally) the line number.

*System Action:* OPERTUNE recovery continues to document the abend.

*User Response:* Contact BMC Software Customer Support to determine the cause of the abend.

BMC31067E  **PSW word1 word2 ILC: length, IC: interruptCode, TRAN: address**

*Explanation:* This message indicates the contents of the program status word at the time of the abend, followed by the length of the failing instruction and (optionally) the interrupt code and the address generating the translation exception.

*System Action:* OPERTUNE recovery continues to document the abend.

*User Response:* Contact BMC Software Customer Support to determine the cause of the abend.

BMC31068E  **DATA AT PSW: word1 word2 word3 word4**

*Explanation:* This message displays the contents of the four words of storage immediately around the PSW address.

*System Action:* OPERTUNE recovery continues to document the abend.

*User Response:* Contact BMC Software Customer Support to determine the cause of the abend.

BMC31069E  **GPRS range: word1 word2 word3 word4**

*Explanation:* This message indicates the contents of four of the general purpose registers at the time of the abend. This message is repeated for each of the four ranges of registers (0-3, 4-7, 8-11, 12-15).

*System Action:* OPERTUNE recovery continues to document the abend.

*User Response:* Contact BMC Software Customer Support to determine the cause of the abend.
BMC31070E  HASID: homeAddressID, PASID: primaryAddressID, SASID: secondaryAddressID

Explanation: This message indicates the cross-memory environment at the time of the abend.

System Action: OPERTUNE recovery continues to document the abend.

User Response: Contact BMC Software Customer Support to determine the cause of the abend.

BMC31090E  UNABLE TO LOCATE FVT

Explanation: OPERTUNE dialog initialization logic was unable to locate an OPERTUNE control block crucial to performing the dialog.

System Action: The dialog abends.

User Response: Contact BMC Software Customer Support to determine the cause of the failure.

BMC31098E  DDTRCMD OPERTUNE - Function failed: name DDTRCMD, entry address address

Explanation: OPERTUNE cannot process a command request because an internal function (DDTRCMD) failed. The entry address of the function is listed. Message BMC31099E accompanies this message with more information.

System Action: Command request process terminates.

User Response: Save the output from messages BMC31098E and BMC31099E and supporting documentation from the system log (SYSLOG). Contact BMC Software Customer Support for assistance.

BMC31099E  DDTRCMD OPERTUNE - Function failed: abend code code, PSW psw.

Explanation: OPERTUNE cannot process a command request because an internal function (DDTRCMD) failed. The program status at the time of the failure (psw) is listed. The abend code indicates the nature of the failure. For possible values, see the IBM Messages and Codes manual. Message BMC31098E accompanies this message with more information.

System Action: Command request process terminates.

User Response: Save the output from messages BMC31098E and BMC31099E and supporting documentation from the system log (SYSLOG). Contact BMC Software Customer Support for assistance.

BMC31100E  SMP NOT FOUND DURING FREEMAIN

Explanation: OPERTUNE was unable to locate a control block on an appropriate chain during an attempt to free storage.

System Action: OPERTUNE frees the requested storage.

User Response: Contact BMC Software Customer Support to determine why the control block could not be located.
<table>
<thead>
<tr>
<th>Code</th>
<th>Message Title</th>
<th>Explanation</th>
<th>System Action</th>
<th>User Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC31101E</td>
<td>UNABLE TO LOCATE LATCH ID</td>
<td><em>Explanation:</em> OPERTUNE was unable to determine the appropriate latch parameters during an attempt to obtain a DB2 latch.</td>
<td>System Action: The requested task abends.</td>
<td><em>User Response:</em> Contact BMC Software Customer Support to determine why the latch ID could not be located.</td>
</tr>
<tr>
<td>BMC31103E</td>
<td>INVALID GETLOCK COUNT</td>
<td><em>Explanation:</em> While attempting to release the local lock, a task determined that it did not hold the local lock.</td>
<td>System Action: None.</td>
<td><em>User Response:</em> Save the SVC dump taken by OPERTUNE, and contact BMC Software Customer Support to determine why the local lock was not held.</td>
</tr>
<tr>
<td>BMC31105E</td>
<td>IN USE WORK REQUEST FOUND ON FREE CHAIN</td>
<td><em>Explanation:</em> A work request was removed from the available work request chain. The work request was marked as already in use. None of the work requests on the available work request should be in use.</td>
<td>System Action: The current task is abended.</td>
<td><em>User Response:</em> Contact BMC Software Customer Support to determine the cause of the problem.</td>
</tr>
<tr>
<td>BMC31106E</td>
<td>ATTEMPTING TO RETURN WORK REQUEST NOT IN USE</td>
<td><em>Explanation:</em> A task completed a work request and, in the process of placing it on the free queue, determined that the work request was not in use. This is an invalid condition.</td>
<td>System Action: The work request is not placed on the free queue.</td>
<td><em>User Response:</em> Contact BMC Software Customer Support to determine the cause of the failure.</td>
</tr>
<tr>
<td>BMC31107E</td>
<td>REMOVE RECOVERY ENCOUNTERED WITH NO ARE ELEMENTS</td>
<td><em>Explanation:</em> A delete recovery point request was made, no recovery points were in effect.</td>
<td>System Action: None.</td>
<td><em>User Response:</em> Contact BMC Software Customer Support to determine why the invalid sequence occurred.</td>
</tr>
</tbody>
</table>
**BMC31108E  FREEMAIN VALIDATION ERROR - SMP PREFIX INVALID**

*Explanation:* The control block eye-catcher did not contain the proper data when it was validated.

*System Action:* The task requesting the FREEMAIN abends.

*User Response:* Contact BMC Software Customer Support to determine why the control block failed validation.

**BMC31109E  ADDWORK ERROR - DUPLICATE ENTRY IN WRE CHAIN**

*Explanation:* A task attempted to add a control block to a chain that already contained the same control block.

*System Action:* The task requesting the addwork abends.

*User Response:* Contact BMC Software Customer Support to determine why the control block was already on the chain.

**BMC31110E  FREE WORK REQUEST FOUND ON WORK QUEUE**

*Explanation:* The current task was removing a work request from its work queue. The work request was marked as not in use. All of the work requests on a tasks work queue should be marked in use.

*System Action:* The current task is abended.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31111D  EHB NOT FOUND DURING DEQ REQUEST FOR name**

*Explanation:* This debugging message indicates that a DEQ was issued without a corresponding ENQ.

*System Action:* None.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31112E  code ABEND OCCURRED IN THE task**

*Explanation:* A recoverable abend occurred in the indicated task. Some of the task’s functions might not have finished.

*System Action:* The request terminates.

*User Response:* Look for other messages in the OPERTUNE job log which might indicate the cause of the problem. If none are found, contact BMC Software Customer Support to determine the cause of the problem.
BMC31113E  **RC=returnCode** ENCOUNTED ATTEMPTING TO SCHEDULE THE function IRB

*Explanation:* OPERTUNE was unable to schedule an IRB to complete the requested function

*System Action:* The request terminates.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

BMC31114E  **SVC 99 ERROR, VERB=action, RC=returnCode, ERROR=errorCode, REASON=reasonCode**

*Explanation:* An error occurred while the requested dynamic allocation or deallocation was being attempted. Additional messages are issued giving more reasons for the error.

*System Action:* The request is rejected.

*User Response:* Look for other messages in the OPERTUNE job log that might indicate the cause of the problem. If none is found, contact BMC Software Customer Support to determine the cause of the problem.

BMC31115E  **SVC 99 MESSAGE EXTRACTION FAILED, RC=returnCode**

*Explanation:* OPERTUNE attempted to extract error messages from the dynamic allocation routine after an error occurred, but was unsuccessful.

*System Action:* The request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

BMC31116E  **SVC 99 RECEIVED RC=returnCode ISSUING ERROR WTOS**

*Explanation:* After a dynamic allocation failure, the system was unable to issue WTOs indicating the cause of the problem.

*System Action:* None.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

BMC31117E  **SVC 99 INFORMATION RETRIEVAL ERROR=code ON TEXT UNIT=value**

*Explanation:* A dynamic allocation information retrieval request encountered an error on the indicated text unit.

*System Action:* The request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.
**BMC31118E**  
**SVC 99 MESSAGE EXTRACTION UNABLE TO FREE MESSAGE AREA**

*Explanation:* After a dynamic allocation error, OPERTUNE extracted and issued the error messages from the dynamic allocation routine. OPERTUNE was then unable to free the area that contained the error messages.

*System Action:* The request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

---

**BMC31125W**  
**NO TARGET SUBSYSTEMS DEFINED ON THIS PROCESSOR**

*Explanation:* OPERTUNE was unable to locate the definition of a DB2 subsystem on this MVS system.

*System Action:* OPERTUNE initialization continues.

*User Response:* OPERTUNE is capable of performing only VTAM and administrative functions.

---

**BMC31127W**  
**DB2ssid IS UNDER THE CONTROL OF THE opertuneID OPERTUNE SYSTEM**

*Explanation:* You attempted to control the indicated DB2 subsystem with an OPERTUNE system, but the OPERTUNE system indicated in the message already has control of this DB2 subsystem. Each DB2 subsystem can be controlled by only one OPERTUNE at a time.

*System Action:* The DB2 subsystem remains under control of the indicated OPERTUNE system.

*User Response:* You can remove control of the DB2 subsystem by issuing the ALTER REMSYS command; then assume control with the OPERTUNE system of your choice.

---

**BMC31128E**  
**DB2ssid RELEASE LEVEL (release) IS NOT SUPPORTED BY OPERTUNE**

*Explanation:* The indicated DB2 subsystem is at a release level that is not yet supported by OPERTUNE.

*System Action:* OPERTUNE does not recognize the DB2 subsystem.

*User Response:* Contact BMC Software Customer Support to determine when the specified release of DB2 will be supported.
BMC31129E  UNSUPPORTED LEVEL OF THE name CONTROL BLOCK IN DB2ssid

Explanation: The indicated DB2 control block is at a PTF level not supported by OPERTUNE.

System Action: OPERTUNE will not recognize the DB2 subsystem and will not allow it to be modified.

User Response: Issue the following diagnostic command:

```
F opertuneID,-DUMP name
```

where opertuneID is the OPERTUNE profile name (if OPERTUNE is running as a started task) or the job name of the batch job (if OPERTUNE is running as a batch job).

After obtaining the results of this command, contact BMC Software Customer Support for further assistance.

If BMC Software Customer Support supplies a zap, apply it to the OPERTUNE execution LOAD library. Then issue the following command from the system console to enable OPERTUNE for the unsupported DB2 subsystem:

```
F opertuneID,ALTER ADDSYS(DB2ssid)
```

where opertuneID is the OPERTUNE identifier and DB2ssid is the DB2 subsystem ID.

BMC31130E  name IS A type SUBSYSTEM - NOT LICENSED FOR THAT TYPE

Explanation: The OPERTUNE profile indicates a subsystem to be controlled by this OPERTUNE. This OPERTUNE, however, is not licensed to control that type of subsystem.

System Action: The subsystem is not controlled by this OPERTUNE.

User Response: If changes against the subsystem are desired, either add the subsystem to an OPERTUNE licensed for that type of subsystem or contact your BMC Software Sales Representative to determine how to obtain the required license.

BMC31131E  SAB CONTROL BLOCK NOT FOUND ON CHAIN

Explanation: While attempting to relinquish control of a subsystem, a required control block could not be found.

System Action: The request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.
BMC31132E  CROSS MEMORY AUTHORIZATION FOR *name* FAILED, RC=returnCode

*Explanation:* OPERTUNE was unable to get authorization to have cross memory access into the indicated subsystem address space (*name*).

*System Action:* Subsequent requests for that address space will fail.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

BMC31133E  UNABLE TO RESET CHANGES IN SUBSYSTEM *name*

*Explanation:* OPERTUNE was unable to perform a RESET ALL command while relinquishing control of the indicated subsystem (*name*).

*System Action:* The subsystem is left with all changes intact.

*User Response:* Look for other messages in the OPERTUNE job log which might indicate the cause of the problem. If none are found, contact BMC Software Customer Support to determine the cause of the problem.

BMC31150W  (FCB=fcbName) TASK STILL HAS SUBTASKS ACTIVE

*Explanation:* A task in the process of terminating was found to have active subtasks. This is an OPERTUNE protocol error.

*System Action:* The task continues to terminate without attempting to terminate its subtask.

*User Response:* Contact BMC Software Customer Support to determine why the task attempted to terminate with subtasks still active.

BMC31151W  (FCB=fcbName) FCB NOT FOUND IN FCB STRUCTURE

*Explanation:* An OPERTUNE control block for a task in the process of terminating was not found on the appropriate control block chain.

*System Action:* The task continues to terminate without dechaining the control block.

*User Response:* Contact BMC Software Customer Support to determine why the control block was not found on the chain.

BMC31152E  INVALID TRANSFER CONTROL ENCOUNTERED

*Explanation:* An OPERTUNE task attempted to transfer control to another task. The request to do so was invalid. This is an OPERTUNE internal error.

*System action:* An SVCDUMP is requested. The current request is aborted. The OPERTUNE system may shut down.

*User Response:* Ensure the SVCDUMP is kept. Contact BMC Software Technical Support to resolve the problem.
<table>
<thead>
<tr>
<th>BMC31154W</th>
<th><strong>OPERTUNE FOR DB2 TRIAL WILL EXPIRE IN ( nnn ) DAYS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>The limited trial period for OPERTUNE will expire in the indicated number of days.</td>
</tr>
<tr>
<td><strong>System Action:</strong></td>
<td>OPERTUNE continues to initialize.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Contact your BMC Software sales representative if you want to extend the duration of the trial period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC31155E</th>
<th><strong>OPERTUNE FOR DB2 IS NOT LICENSED ON THIS CPU</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>The limited trial period for OPERTUNE has expired and it is not currently licensed to execute on this CPU.</td>
</tr>
<tr>
<td><strong>System Action:</strong></td>
<td>OPERTUNE might terminate.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Contact BMC Software contracts administration to obtain a license for this CPU.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC31156E</th>
<th><strong>name SUBTASK ABENDED - ( completionCode )</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An OPERTUNE subtask has abended. Messages 31060 through 31070 precede this message and give a more detailed explanation for the abend.</td>
</tr>
<tr>
<td><strong>System Action:</strong></td>
<td>OPERTUNE terminates.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Contact BMC Software Customer Support to determine the cause of the abend.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC31157E</th>
<th><strong>OUTPUT MESSAGE BUFFER IS FULL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>More messages were generated in response to an OPERTUNE command than the response message buffer could hold.</td>
</tr>
<tr>
<td><strong>System Action:</strong></td>
<td>The additional messages are discarded, but the command execution continues.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Contact BMC Software Customer Support to determine why the command generated so many response messages.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC31158D</th>
<th><strong>taskName TERMINATED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>A task terminated successfully.</td>
</tr>
<tr>
<td><strong>System Action:</strong></td>
<td>None.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>None. Information only.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC31159D</th>
<th><strong>taskName INITIALIZED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>A task initialized successfully.</td>
</tr>
<tr>
<td><strong>System Action:</strong></td>
<td>None.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>None. Information only.</td>
</tr>
</tbody>
</table>
**BMC31160D**  
*taskName* INITIALIZATION FAILED - RC=*returnCode*  

*Explanation:* A task failed to initialize because of the indicated return code. This message is usually preceded by another, more detailed, error message.  

*System Action:* OPERTUNE terminates.  

*User Response:* Contact BMC Software Customer Support to determine why the task was unable to initialize.  

**BMC31161E**  
INVALID RETURN CODE(*returnCode*) FROM USER EXIT *name*  

*Explanation:* An invalid return code was encountered from the indicated user exit. This return code is not one of the documented return codes for that exit.  

*System Action:* An unsuccessful return code is used.  

*User Response:* Contact your OPERTUNE administrator to determine why the user exit returned the invalid return code.  

**BMC31162E**  
FCB NOT FOUND FOR TCB *name* DURING TERMINATION  

*Explanation:* During end-of-task processing for the indicated TCB, the required OPERTUNE control block was not found.  

*System Action:* The OPERTUNE system abends.  

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.  

**BMC31163E**  
COMMAND PROCESSOR NOT ACTIVE  

*Explanation:* An OPERTUNE command was received, but the command processor task was not available to process it. This is usually caused by a previous abend in the command processor task.  

*System Action:* The command is not processed.  

*User Response:* Contact BMC Software Customer Support to determine why the command processor was not available.  

**BMC31164I**  
*text*  

*Explanation:* This message indicates the input command issued to OPERTUNE. It is followed by the response message to that command.  

*System Action:* Command processing continues.  

*User Response:* None. Information only.
BMC31165E   COMMAND TOO LARGE FOR WORK AREA

Explanation: The input command contained too many characters for the command parser work area.

System Action: Command processing terminates.

User Response: Shorten the command by specifying fewer optional parameters.

BMC31166E   TOO MANY TOKENS IN COMMAND

Explanation: The input command contained too many tokens (keywords/parameters/delimiters) for the parser work area.

System Action: Command processing terminates.

User Response: Shorten the command by specifying fewer optional parameters.

BMC31167E   UNBALANCED QUOTES IN COMMAND

Explanation: The input command contained an odd number of single quotes (') in the command string.

System Action: Command processing terminates.

User Response: Respecify the command with an even number of single quotes (') in the command string.

BMC31169W   OPERTUNE FOR DB2 GRACE PERIOD HAS NOT BEEN RESET

Explanation: OPERTUNE is properly licensed; however, at some point in the past, it was operating under a violation and began a grace period. The grace period has not been reset.

System Action: OPERTUNE runs normally.

User Response: Contact your BMC Software Sales Representative for instructions.

BMC31170W   OPERTUNE FOR DB2 IS NOT LICENSED ON THIS CPU

Explanation: OPERTUNE is properly licensed, but not for the CPU upon which it is executing. The licensing password indicates that this violation should not terminate the product.

System Action: OPERTUNE runs normally.

User Response: Contact your BMC Software Sales Representative for instructions on how to properly license the product on the extra CPU.
<table>
<thead>
<tr>
<th>BMC31171W</th>
<th><strong>PROCESSOR CONTAINS MORE CPUS THAN THE OPERTUNE FOR DB2 LICENSE ALLOWS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> OPERTUNE is properly licensed, but not for the number of internal CPUs on the processor in which it is executing. The licensing password indicates that this violation should not terminate the product.</td>
<td></td>
</tr>
<tr>
<td><strong>System Action:</strong> OPERTUNE runs normally.</td>
<td></td>
</tr>
<tr>
<td><strong>User Response:</strong> Contact your BMC Software Sales Representative for instructions on how to properly license the product on the processor.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC31172W</th>
<th><strong>THE OPERTUNE FOR DB2 LICENSE HAS EXPIRED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> OPERTUNE was properly licensed, but the license has expired. The licensing password indicates that this violation should not terminate the product.</td>
<td></td>
</tr>
<tr>
<td><strong>System Action:</strong> OPERTUNE runs normally.</td>
<td></td>
</tr>
<tr>
<td><strong>User Response:</strong> Contact your BMC Software Sales Representative for instructions on how to properly license the product on the processor.</td>
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<tr>
<th>BMC31173E</th>
<th><strong>PROCESSOR CONTAINS MORE CPUS THAN THE OPERTUNE FOR DB2 LICENSE ALLOWS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> OPERTUNE is properly licensed, but not for the number of internal CPUs on the processor in which it is executing. The licensing password indicates that this violation will terminate the product.</td>
<td></td>
</tr>
<tr>
<td><strong>System Action:</strong> OPERTUNE terminates.</td>
<td></td>
</tr>
<tr>
<td><strong>User Response:</strong> Contact your BMC Software Sales Representative for instructions on how to properly license the product on the processor.</td>
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<tr>
<th>BMC31174E</th>
<th><strong>THE OPERTUNE FOR DB2 LICENSE HAS EXPIRED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> OPERTUNE was properly licensed, but the license has expired. The licensing password indicates that this violation will terminate the product.</td>
<td></td>
</tr>
<tr>
<td><strong>System Action:</strong> OPERTUNE terminates.</td>
<td></td>
</tr>
<tr>
<td><strong>User Response:</strong> Contact your BMC Software Sales Representative for instructions on how to properly license the product on the processor.</td>
<td></td>
</tr>
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</table>
BMC31175E UNABLE TO INITIATE GRACE PERIOD FOR OPERTUNE FOR DB2

Explanation: A previous error message has been issued indicating that the OPERTUNE product is being executed contrary to the license agreement. An error occurred while attempting to initiate a grace period in which the product will be allowed to run.

System Action: OPERTUNE terminates.

User Response: The OPERTUNE started task does not have the RACF authority to update the licensing module in the OPERTUNE load library. Update the RACF authority to allow a grace period to be initiated, or contact your BMC Software Sales Representative for instructions on how to properly license the product on the processor.

BMC31176E OPERTUNE FOR DB2 PHASE 2 SECURITY CHECK FAILED, RC=returnCode

Explanation: An unanticipated return code was returned from the licensing software.

System Action: OPERTUNE terminates.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.

BMC31177E OPERTUNE FOR DB2 GRACE PERIOD HAS EXPIRED

Explanation: The product is being run contrary to the license agreement. The grace period for correcting this has expired.

System Action: OPERTUNE terminates.

User Response: Contact your BMC Software Sales Representative for instructions on how to properly license the product.

BMC31178W OPERTUNE FOR DB2 GRACE PERIOD WILL EXPIRE IN nnn DAYS

Explanation: The product is being run contrary to the license agreement. However, the product is allowed to run because the product has the indicated number of days remaining in the trial period. When the trial period expires, BMC31177E will be issued instead and the product will terminate.

System Action: OPERTUNE continues to initialize.

User Response: Contact your BMC Software Sales Representative for instructions on how to properly license the product.
**BMC31179E**  
**code ABEND OCCURRED IN name USER EXIT**

Explanation: The indicated abend occurred in the specified OPERTUNE user exit.

System Action: An SVCDUMP is attempted. An attempt is made to recover from the abend.

User Response: If the exit has not been modified, contact BMC Software Customer Support to determine the cause of the abend. If it has been modified, examine the dump to determine the corrections needed to make the exit perform properly.

**BMC31180E**  
**OPEN OF PROFILE KSDS FAILED - RC=returnCode**

Explanation: OPERTUNE received the indicated error code from the open SVC while attempting to open the profile KSDS.

System Action: OPERTUNE terminates.

User Response: Check the DDTPROFS ddname in the OPERTUNE JCL to ensure that it refers to the correct profile KSDS. If it does, ensure that the KSDS was defined with the attributes indicated in the product install; otherwise, contact BMC Software Customer Support to determine why the open failed.

**BMC31181E**  
**CLOSE OF PROFILE KSDS FAILED - RC=returnCode**

Explanation: OPERTUNE received the indicated error code from the close SVC while attempting to close the profile KSDS.

System Action: OPERTUNE termination continues.

User Response: Check the DDTPROFS ddname in the OPERTUNE JCL to ensure that it refers to the correct profile KSDS. If it does, ensure that the KSDS was defined with the attributes indicated in the product install. Otherwise, contact BMC Software Customer Support to determine why the close failed.

**BMC31182E**  
**action FAILED, KEY=key, RC=(returnCode,reasonCode)**

Explanation: OPERTUNE received the indicated return and reason codes while attempting the indicated action against the profile data set.

System Action: The request is rejected.

User Response: Check the DDTPROFS ddname in the OPERTUNE JCL to ensure that it refers to the correct profile KSDS. If it does, ensure that the KSDS was defined with the attributes indicated in the product installation. If no problem is found, contact BMC Software Customer Support to determine why the action failed.
BMC31183E  INVALID I/O REQUEST RECEIVED (type)

Explanation: An invalid I/O request was received by the element I/O task.
System Action: The request is rejected.
User Response: Contact BMC Software Customer Support to determine the cause of the failure.

BMC31184E  UNABLE TO DETERMINE PROFILE DATA SET NAME

Explanation: The element I/O initialization routine was unable to determine the data set name of the profile data set.
System Action: The OPERTUNE system terminates.
User Response: Check to ensure that the DDTPROFS ddname in the OPERTUNE JCL is specified and refers to the correct profile KSDS. If no problem is found, contact BMC Software Customer Support to determine why the data set name cannot be located.

BMC31185W  THE TRACE FILE WILL NOT BE USED, OPEN FAILED

Explanation: OPERTUNE was unable to open the diagnostic trace file (ddname DDTTRACE).
System Action: The requests/responses are not traced.
User Response: Check the DDTTRACE ddname in the OPERTUNE JCL to ensure that it refers to a valid trace data set. For more information about valid trace data sets, refer to the diagnostic procedures in the OPERTUNE Reference Manual.

BMC31200E  verb IS AN INVALID COMMAND

Explanation: The indicated verb is not a valid command verb for OPERTUNE.
System Action: Command processing terminates.
User Response: Correct and reissue the command.

BMC31201E  NO PARAMETERS ALLOWED FOR THE verb COMMAND

Explanation: A parameter was specified on the indicated command; however, that command has no parameters.
System Action: Command processing terminates.
User Response: Correct and reissue the command.
**BMC31202E**  
(name) IS NOT THE NAME OF A VALID TARGET SPECIFIER

*Explanation:* A target was specified (name) for a request, but there is no valid target by that name.

*System Action:* The command is rejected.

*User Response:* Correct the target to specify a valid name, and reissue the command.

**BMC31203W**  
(name) TASK NOT AVAILABLE

*Explanation:* The indicated OPERTUNE task (name) is not currently available to process the request.

*System Action:* Request processing terminates.

*User Response:* Check for previous messages which might indicate the source of the problem. Then, contact BMC Software Customer Support to determine why the task is not available.

**BMC31204E**  
AUDIT LOG NOT DEFINED FOR (name) SUBSYSTEM

*Explanation:* The target of the HISTORY command specified a target subsystem (name) for which there is no audit log defined.

*System Action:* The command is rejected.

*User Response:* Correct the target to specify a subsystem with an audit log, and reissue the command.

**BMC31205E**  
(name) IS NOT THE NAME OF A KNOWN type

*Explanation:* The command specified a parameter (name), but OPERTUNE could not match it to a system of that type (type).

*System Action:* The command is rejected.

*User Response:* Correct the command to specify a known name.

**BMC31206I**  
OPERTUNE PRODUCT LEVEL: level

*Explanation:* This message is issued in response to the MAINT command. It indicates the current version, release, and modification level of OPERTUNE.

*System Action:* Command processing continues.

*User Response:* None.
BMC31207I       PTFS APPLIED: ptf1, ptf2, ptf3, ptf4

Explanation: This message is issued in response to the MAINT command. It indicates one to four PTFs that have been applied to the original release of OPERTUNE. If more than four PTFs have been applied, this message will be repeated until all of the applied PTFs have been listed.

System Action: Command processing continues.

User Response: None.

BMC31208E       INVALID verb KEYWORD SPECIFIED (keyword)

Explanation: The indicated keyword (keyword) is not valid for the current command (verb).

System Action: The command is rejected.

User Response: Correct the command to use one of the valid keywords for the command.

BMC31209E       EXPECTING OPEN PARENTHESES

Explanation: The command syntax required an open parenthesis, but the end of the command was found instead.

System Action: The command is rejected.

User Response: Correct the command syntax to contain the open and close parentheses along with the parameters.

BMC31210E       string INVALID - EXPECTING OPEN PARENTHESES

Explanation: The command syntax required an open parenthesis where the indicated string (string) was found.

System Action: The command is rejected.

User Response: Correct the command syntax to place an open parenthesis where the string was specified.

BMC31211E       keyword KEYWORD NOT SPECIFIED

Explanation: The indicated keyword (keyword) is required for the current command.

System Action: The command is rejected.

User Response: Correct the command syntax to include the required keyword.
BMC31212E  EXPECTING CLOSE PARENTHESIS

Explanation: A close parenthesis was expected, but the end of the command was found instead.

System Action: The command is rejected.

User Response: Correct the command syntax to place a close parenthesis at the end of the command.

BMC31213E  string INVALID - EXPECTING CLOSE PARENTHESIS

Explanation: A close parenthesis was expected, but the indicated string (string) was found instead.

System Action: The command is rejected.

User Response: Correct the command syntax to place a close parenthesis at the proper place in the command.

BMC31214E  string INVALID - EXPECTING END OF COMMAND

Explanation: The command contained an additional parameter (string) where the end of the command was expected.

System Action: The command is rejected.

User Response: Correct the command syntax to remove any additional parameters after the end of the command.

BMC31215I  verb COMMAND PROCESSING COMPLETE

Explanation: The command processing for the indicated command (verb) is now complete.

System Action: None.

User Response: Check the previous messages to determine the success or failure of the requested command.

BMC31216I  variable CHANGED FROM oldValue TO newValue

Explanation: The indicated system profile variable has been successfully changed from one value (old) to the specified value (new).

System Action: The system operates with the new system profile variable set to the new value.

User Response: None.
**BMC31217W**  
*variable ALREADY SET TO value*

*Explanation:* The indicated system profile variable has already been set to the specified value (*value*).

*System Action:* None.

*User Response:* None if the specified value was the desired one. Otherwise, respecify the command with the desired value.

**BMC31218E**  
*value INVALID - field MUST BE num CHARACTERS OR LESS IN LENGTH*

*Explanation:* The value in the specified field is invalid because it is too large. It must not be longer than the indicated number of characters.

*System Action:* The command is rejected.

*User Response:* Correct the command to contain a valid value.

**BMC31219E**  
*value INVALID - MUST BE BETWEEN low AND high*

*Explanation:* The specified value is invalid. It must be numeric and in the indicated range (*low* to *high*).

*System Action:* The command is rejected.

*User Response:* Correct the command to contain a numeric value in the indicated range.

**BMC31220E**  
*ALTER keyword PARAMETER MISSING*

*Explanation:* The parameter required after the open parenthesis on the ALTER command was missing.

*System Action:* The command is rejected.

*User Response:* Complete the command syntax, and reissue the command.

**BMC31221E**  
*value INVALID - MUST BE EITHER value1 OR value2*

*Explanation:* The specified value is invalid. It must be one of the indicated values.

*System Action:* The command is rejected.

*User Response:* Correct the command use one of the indicated values.

**BMC31222E**  
*target WITH THE NAME OF name ARE ACTIVE*

*Explanation:* Multiple eligible targets with the specified name are currently active. OPERTUNE cannot determine which one should receive the request.

*System Action:* The command is rejected.

*User Response:* Correct the target specification to be more specific about which system the command is for, and reissue the command.
### BMC31223W  **DB2ssid IS ALREADY IN USE BY THIS OPERTUNE**

**Explanation:** The ADDSYS command specified that the indicated DB2 subsystem is to be controlled by this OPERTUNE. However, the DB2 subsystem is already being controlled by this OPERTUNE.

**System Action:** The command is rejected.

**User Response:** None, if the subsystem name specified was correct. Otherwise, change the command to specify the correct subsystem name.

### BMC31224E  **DB2ssid IS NOT THE NAME OF A VALID SUBSYSTEM**

**Explanation:** The DB2 subsystem specified in the ADDSYS command is not the name of a valid DB2 subsystem on this MVS system.

**System Action:** The command is rejected.

**User Response:** Correct the command to specify a valid DB2 subsystem ID for this MVS system.

### BMC31225E  **name COMMAND DOES NOT ALLOW THE SPECIFICATION OF A TARGET type**

**Explanation:** The indicated command (name) has a target specification of the wrong type (type).

**System Action:** The command is rejected.

**User Response:** Correct the target specification to indicate the correct type of target, and reissue the command.

### BMC31226I  **name IS NOW UNDER THE CONTROL OF THIS OPERTUNE**

**Explanation:** The subsystem (name) in the ADDSYS command has been added to the current OPERTUNE.

**System Action:** The specified subsystem is now modifiable by this OPERTUNE.

**User Response:** None.

### BMC31227W  **name IS NOT IN USE BY THIS OPERTUNE**

**Explanation:** The subsystem (name) in the REMSYS command is not under the control of this OPERTUNE.

**System Action:** The command is rejected.

**User Response:** Correct the command to specify the name of a DB2 subsystem currently being controlled by this OPERTUNE.
**BMC31228I**  **DB2ssid IS NO LONGER UNDER THE CONTROL OF THIS OPERTUNE**

*Explanation:* The DB2 subsystem specified in the REMSYS command has successfully been removed from the control of the current OPERTUNE. All modifications to that DB2 subsystem have been reset to their original values.

*System Action:* The current OPERTUNE will no longer accept modification requests for the specified subsystem.

*User Response:* None. Information only.

**BMC31229E**  **value INVALID - field MUST BEGIN WITH ALPHABETIC CHARACTER**

*Explanation:* The first character of the specified value (*value*) does not begin with an alphabetic character as required.

*System Action:* None.

*User Response:* Correct the value to begin with an alphabetic character.

**BMC31230E**  **USER NOT AUTHORIZED FOR ALTER field COMMAND**

*Explanation:* You are not authorized to issue the ALTER command for the indicated field (*field*).

*System Action:* The command is rejected.

*User Response:* Contact your OPERTUNE administrator to obtain the desired authorization.

**BMC31231I**  **TERMINATING DUE TO SHUTDOWN COMMAND**

*Explanation:* OPERTUNE is terminating in response to a SHUTDOWN command.

*System Action:* OPERTUNE termination begins. All of the subsystems except those specified in the SHUTDOWN command will be left with their ZPARM values as is.

*User Response:* None.

**BMC31232E**  **user NOT AUTHORIZED FOR type COMMAND**

*Explanation:* You do not have the required authorization in your user profile to issue the indicated command type (*type*).

*System Action:* The command is rejected.

*User Response:* Contact your OPERTUNE administrator to give your user profile the desired authorization.
**BMC31233W**  **THERE ARE NO REMOTE OPERTUNES AVAILABLE**

*Explanation:* This message is issued in response to a STATUS command. It indicates that this OPERTUNE system is not currently connected, through XCF or VTAM to any remote OPERTUNE systems.

*System Action:* Command processing continues.

*User Response:* None.

**BMC31234E**  **EXPECTED type COMMAND NOT FOUND**

*Explanation:* The command (verb) was issued without the required parameter.

*System Action:* The command is rejected.

*User Response:* Correct the command syntax to contain the desired command parameter.

**BMC31235W**  **command - ISSUED ASYNCHRONOUSLY**

*Explanation:* The indicated MVS command (command) was issued asynchronously. The desired effect of the command may or may not have completed at this time.

*System Action:* Command processing continues.

*User Response:* Check the SYSLOG to determine when the command has completed.

**BMC31236E**  **value INVALID - EXPECTING ‘parm’ OR END OF COMMAND**

*Explanation:* The indicated value (value) is invalid. The only optional parameter is parm.

*System Action:* The command is rejected.

*User Response:* Correct the command syntax to properly specify the parm parameter, or leave the parameter off entirely.

**BMC31237E**  **name IS NOT THE NAME OF A REMOTE OPERTUNE**

*Explanation:* The command specified a remote OPERTUNE system (name) that does not exist.

*System Action:* The command is rejected.

*User Response:* Correct the command to specify a valid remote OPERTUNE, and reissue the command.
**BMC31238I**  
**REMOTE OPERTUNE**=name, **VERSION**=version, **SESSION**=state

*Explanation:* This message is issued in response to a STATUS command. It indicates the name of a remote OPERTUNE system (name), the version of that system (version), and the state of the communication between the two (state; UP, DOWN, STARTING, or STOPPING).

*System Action:* None.

*User Response:* None.

**BMC31239E**  
**LOG SPECIFICATION IS MISSING**

*Explanation:* The log specification parameter for the ALTER LOG command is missing. This parameter indicates the sysout class when the SYSOUT keyword is used or the data set name when the DA keyword is used.

*System Action:* The command is rejected.

*User Response:* Correct the command syntax to specify the missing parameter.

**BMC31240E**  
**LOG SPECIFICATION (keyword) TOO LONG**

*Explanation:* The log specification parameter for the ALTER LOG command is too long for the specified keyword (keyword). It can be a maximum of 1 for the SYSOUT keyword or 44 for the DA keyword.

*System Action:* The command is rejected.

*User Response:* Correct the command syntax to specify a valid keyword.

**BMC31241E**  
**EXPECTING APPLID**

*Explanation:* The SEND command requires an APPLID to determine where to send the command. The APPLID was not specified on the command.

*System Action:* The command is rejected.

*User Response:* Correct the command syntax to contain both the APPLID at which the command is executed and the command to be sent.

**BMC31242E**  
**EXPECTED PARAMETER FOR KEYWORD name NOT FOUND**

*Explanation:* The command was missing the keyword’s required parameter (name).

*System Action:* The command is rejected.

*User Response:* Complete the command syntax, and reissue the command.
OPERTUNE messages

**BMC31243I**  
*feature HAS BEEN USED number TIMES*

*Explanation:* This message is issued in response to a USAGE command. It indicates the name of an OPERTUNE feature (*feature*) and the number of times (*number*) it has been used since the OPERTUNE system was last started.

*System Action:* None.

*User Response:* None.

**BMC31244I**  
*NO FEATURES HAVE BEEN USED*

*Explanation:* This message is issued in response to a USAGE command. It indicates that none of the OPERTUNE features have been used since the OPERTUNE system was last started.

*System Action:* None.

*User Response:* None.

**BMC31245I**  
*SUBSYSTEMS=num, REQUESTS PENDING=req, RESPONSES PENDING=resp*

*Explanation:* This message is issued in response to a STATUS command. It indicates the number of subsystems under the remote OPERTUNE’s control (*num*), the number of outstanding requests this OPERTUNE is waiting on for the remote OPERTUNE to complete (*req*), and the number of outstanding requests this OPERTUNE needs to complete on behalf of the remote OPERTUNE (*resp*).

*System Action:* None.

*User Response:* None.

**BMC31246I**  
*REQUESTS RECEIVED=nn RESPONSES SENT=nn*

*Explanation:* This message is issued in response to a STATUS command. It indicates the total number of requests that have been received from the remote OPERTUNE and the total number of responses that have been sent to the remote OPERTUNE.

*System Action:* None.

*User Response:* None.

**BMC31247I**  
*NO SUBSYSTEMS ARE UNDER THE CONTROL OF THIS OPERTUNE*

*Explanation:* This message is issued in response to a DISPLAY SUBSYSTEM command. OPERTUNE is not able to modify any subsystems.

*System Action:* Command processing continues.

*User Response:* None.
BMC31248I  DB2=ssid, STATUS=state, SRC=value, DSGROUP=group, OPERTUNE=system

Explanation: This message is issued in response to a DISPLAY SUBSYSTEM command for each subsystem being controlled by an OPERTUNE. It indicates the subsystem name, its status (UP or DOWN), the subsystem’s recognition value, the name of any data sharing group the subsystem belongs to, and the name of the OPERTUNE system controlling the subsystem.

System Action: Command processing continues.
User Response: None.

BMC31249E  THE XBM INTERFACE MODULE IS NOT LOADED

Explanation: Upon attempting to communicate with XBM, the command processor found that the XBM interface module XBMXXCMD had not been loaded successfully at OPERTUNE initialization.

System Action: The XBM command request is rejected.
User Response: Ensure that the XBM load library is in the STEPLIB concatenation of OPERTUNE.

BMC31250E  A RETURN CODE OF rc WAS RECEIVED FROM XBM

Explanation: A command was issued to XBM by OPERTUNE, and a nonzero return code (rc) was received from the XBM interface.

System Action: None.
User Response: Check the return code in the XBM documentation.

BMC31251E  NO RESPONSE RECEIVED FROM XBM

Explanation: XBM responded to OPERTUNE without providing a response buffer.

System Action: The XBM command fails.
User Response: Contact BMC Software Customer Support.

BMC31252I  verb COMMAND VALIDATION SUCCESSFUL

Explanation: The command (verb) has passed OPERTUNE’s validation routines.

System Action: The command is not issued.
User Response: None.

BMC31253I  verb COMMAND VALIDATION COMPLETE

Explanation: The validation of the command (verb) is complete.

System Action: Processing continues.
User Response: None.
BMC31254E  EXPECTED EXIT NAME NOT FOUND

Explanation: The command requires the specification of a user exit. None was found.
System Action: The command is rejected.
User Response: Correct the command syntax to specify the name of the user exit that you want to reload.

BMC31255E  text INVALID - EXPECTING EXIT NAME

Explanation: The command requires the specification of a user exit. It found the indicated text (text) instead.
System Action: The command is rejected.
User Response: Correct the command to specify the name of the user exit that you want to reload.

BMC31256I  exit SUCCESSFULLY RELOADED

Explanation: The RELOAD command completed the request to reload the OPERTUNE user exit.
System Action: Command processing continues.
User Response: None.

BMC31257I  REQUESTS SENT=nn, RESPONSES RECEIVED=nn

Explanation: This message is issued in response to a STATUS command. It indicates the total number of requests that have been sent to the remote OPERTUNE and the total number of responses that have been received from the remote OPERTUNE.
System Action: None.
User Response: None.

BMC31258E  UNABLE TO SUCCESSFULLY PARSE THE COMMAND

Explanation: The command parser was unable to successfully parse the command.
System Action: The command is rejected.
User Response: Ensure that the command has matching quotes and parentheses. If these are correct, try reducing the overall size of the command before reissuing it.
**BMC31259E**  **UNABLE TO LOAD NEW VERSION OF exit**

*Explanation:* The RELOAD command was unable to load a new copy of the OPERTUNE user exit indicated.

*System Action:* Command processing terminates.

*User Response:* Check for additional error messages that indicate why the load failed. If there are no additional messages, check the STEPLIB/JOBLIB/LINKLIST concatenation to ensure that the specified user exit is in the correct library.

**BMC31260E**  **JOBNAME name DOES NOT EXIST**

*Explanation:* The SVCDUMP command processor could not locate the specified job name *(name)*.

*System Action:* The command is rejected.

*User Response:* Correct the job name to specify a valid job name, and reissue the command.

**BMC31261E**  **value INVALID, IT CONTAINS NON-HEX VALUES**

*Explanation:* The value specified can only contain hexadecimal values. Hexadecimal values are in the range 0 through 9 and A through F.

*System Action:* The request is rejected.

*User Response:* Change the field to contain the proper hexadecimal value, and reissue the command.

**BMC31262E**  **EXPECTING SUBSYSTEM NAME**

*Explanation:* The name of the subsystem which the command is to be issued against was missing. The name should follow the open parenthesis.

*System Action:* The command is not issued.

*User Response:* Correct the command syntax to contain the name of a DB2 subsystem after the open parenthesis.

**BMC31263E**  **ASID num IS NOT ACTIVE**

*Explanation:* The SVCDUMP command processor found that the specified asid is not currently being used.

*System Action:* The command is rejected.

*User Response:* Correct the asid to specify a valid ASID, and reissue the command.
**BMC31264E**  **MISSING OR INVALID COMMAND**

*Explanation:* The current request did not contain the expected command.

*System Action:* The command is rejected.

*User Response:* Correct the request to contain a valid command, and reissue the request.

**BMC31265E**  **UNABLE TO PASS THE REQUEST ON TO THE OPERTUNE SYSTEM**

*Explanation:* The interface routines were unable to successfully pass the request to the host OPERTUNE system.

*System Action:* The request is not processed.

*User Response:* Look for other messages in the OPERTUNE job log which might indicate the cause of the problem. If none are found, contact BMC Software Customer Support to determine the cause of the problem.

**BMC31266E**  **ABEND OCCURRED WHILE PROCESSING THE REQUEST**

*Explanation:* The interface routines abended while trying to pass the request to the host OPERTUNE system.

*System Action:* The request is not processed.

*User Response:* Look for other messages in the OPERTUNE job log which might indicate the cause of the problem. If none are found, contact BMC Software Customer Support to determine the cause of the problem.

**BMC31267E**  **THE name COMMAND DOES NOT ALLOW MULTIPLE TARGETS**

*Explanation:* The command request specified multiple targets in the IN clause. This command is only valid for a single target system.

*System Action:* The command is rejected.

*User Response:* Change the command to target only one system, and reissue the command.

**BMC31268E**  **THE name COMMAND TARGET MUST BE A DATA SHARING GROUP, field IS INVALID**

*Explanation:* The command request specified requires its target to be a data sharing group. The indicated field is not the name of a data sharing group.

*System Action:* Command processing terminates.

*User Response:* Change the command to target a data sharing group, and reissue the command.
BMC31269E  value INVALID - RUSIZE MUST BE BETWEEN 256 AND 61440 AND EXPRESSABLE AS M*2**E

Explanation: The value specified for RUSIZE is not a valid VTAM RUSIZE. A VTAM RUSIZE must be a value that can be specified as M*2**E: M is the mantissa and must be between 8 and 15; E is the exponent and must be between 5 and 12.

System Action: The command is rejected.

User Response: Correct the RUSIZE specified to be a value which that be expressed in the expression shown above and reissue the command. For additional information, consult your VTAM manuals.

BMC31270E  NO TARGETS SPECIFIED WITHIN 'IN' CLAUSE

Explanation: The target specification list was empty. At least one target needs to be specified.

System Action: The command is rejected.

User Response: Add one or more valid targets to the command, and reissue the command.

BMC31271E  EXPECTED COMMAND NOT FOUND

Explanation: The command request did not contain any command text to be issued.

System Action: The request is rejected.

User Response: Change the command to add the desired command, and reissue the command.

BMC31272E  ATTEMPT TO LOG COMMAND RESPONSE FAILED

Explanation: The attempt to log the current command request failed. The audit log task would not accept the log request.

System Action: The command is not logged in the audit log or logs.

User Response: Look for other messages in the OPERTUNE job log which might indicate the cause of the problem. If none are found, contact BMC Software Customer Support to determine the cause of the problem.

BMC31274E  field NOT SPECIFIED

Explanation: The indicated field for the current keyword was missing or is invalid.

System Action: The command is rejected.

User Response: Correct the field in error, and reissue the command.
**OPERTUNE messages**

**BMC31275W**  
**ECB WORK REQUEST REJECTED, TASK** task, **REQUEST** type

*Explanation:* An internal OPERTUNE error occurred. The indicated task had earlier made an ECB request. After detecting that the request had completed, it would not accept the request.

*System Action:* The request is discarded.

*User Response:* If an abend did not precede this message, contact BMC Software Customer Support to determine why the work request was rejected.

**BMC31276E**  
**STIMER SET FAILURE, RC=returnCode**

*Explanation:* A STIMERM SET request received the indicated return code. This indicates that the timer request could not be set.

*System Action:* The timer request is discarded. This implies that a timer-related event (SCHEDULE change, internal timer pop) are not properly triggered.

*User Response:* Contact BMC Software Customer Support to determine why the STIMERM request was rejected.

**BMC31277E**  
**STIMER CANCEL FAILURE, RC=returnCode**

*Explanation:* A STIMERM CANCEL request received the indicated return code. This indicates that the timer request could not be cancelled.

*System Action:* None, since the timer request was being cancelled anyway. However, the message is issued since the error should not have occurred, and this can be an indication of future problems.

*User Response:* Contact BMC Software Customer Support to determine why the STIMERM request was rejected.

**BMC31279E**  
**DUPLICATE REQUEST RECEIVED FOR ECB**

*Explanation:* A second wait request was received for the same ECB. Only one wait request can be outstanding for the same ECB.

*System Action:* The task is abended.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31280W**  
**REQUEST** value NOT CANCELED FOR TASK

*Explanation:* During shutdown processing, the asynchronous processor found a request that had not been canceled by the requesting task. All such requests should be canceled before the asynchronous task shutting down.

*System Action:* OPERTUNE shutdown continues.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.
BMC31298I  process ACTIVE -- TRY AGAIN LATER

Explanation: You submitted a command or initiated a process, but a conflicting process or command is active. For example, if you try to change the number of archive data sets while archiving is in process, your request will not be processed, and this message will be issued.

System Action: The requested process is not performed.

User Response: Give the conflicting process some time to finish and try again.

BMC31300I  NO VTAM APPLID SPECIFIED - VTAM COMMUNICATION NOT POSSIBLE

Explanation: No VTAM APPLID was specified in the starting OPERTUNE profile. This OPERTUNE is therefore not eligible for VTAM communications.

System Action: OPERTUNE continues to initialize.

User Response: VTAM communications are optional. No further action is needed to use OPERTUNE on the local MVS system.

BMC31301I  VTAM COMMUNICATIONS ESTABLISHED, APPLID=\text{\textit{name}}

Explanation: OPERTUNE has successfully begun communications with VTAM by opening the indicated application ID.

System Action: OPERTUNE will begin to establish sessions to other remote OPERTUNEs.

User Response: None.

BMC31302E  ERROR PROCESSING RESPONSE FROM APPLID name, UNABLE TO FIND TOKEN id

Explanation: A response message was received from an application ID (name). OPERTUNE was unable to find an outstanding request that matched the response’s token (id).

System Action: The response is ignored.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.

BMC31303I  REMOTE \textit{type} name state AT APPLID name

Explanation: The OPERTUNE at the specified application ID has indicated that the type named name has changed to the indicated state.

System Action: None.

User Response: None.
**BMC31304E**  
**ACB OPEN FAILED WITH RC=returnCode, VTAM OPERATIONS NOT POSSIBLE**

*Explanation:* While attempting to open the VTAM APPLID to establish remote session, the ACB open routine returned an invalid return code.

*System Action:* The OPERTUNE VTAM option is not available.

*User Response:* If the return code is 8, this is usually caused by the APPLID not being defined or not active. Otherwise, contact BMC Software Customer Support to determine the cause of the error.

**BMC31305E**  
**function state TO applid FAILED WITH RC=(returnCode,reasonCode), FDBK2=(code,feedback), SENSE=data**

*Explanation:* An error occurred in the VTAM communications between this OPERTUNE system and the one using the indicated application ID. The other parameters indicate the type of failure that occurred.

*System Action:* The OPERTUNE VTAM option is not available.

*User Response:* Check the VTAM definitions for each application ID involved (see Chapter 9, “VTAM support”). If this does not resolve the problem, contact BMC Software Customer Support to determine the cause of the problem.

**BMC31306W**  
**ACB CLOSE FAILED - RC=returnCode**

*Explanation:* While attempting to close the ACB used for the VTAM APPLID, an invalid return code was received from the close routine.

*System Action:* OPERTUNE no longer uses the APPLID.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31307D**  
**type ENTERED, FCB=value**

*Explanation:* This debugging message indicates that the VTAM invocation of an OPERTUNE supplied user exit has begun.

*System Action:* None.

*User Response:* None.

**BMC31308W**  
**VTAM APPLID name ALREADY IN USE**

*Explanation:* The VTAM APPLID specified is already in use by another OPERTUNE on this MVS system.

*System Action:* The OPERTUNE VTAM option is not available for this OPERTUNE.

*User Response:* Correct one of the two OPERTUNEs to ensure that each VTAM APPLID is used by only one OPERTUNE.
BMC31309D  \textit{type EXITED, FCB=value}

\textit{Explanation:} This debugging message indicates that the VTAM invocation of an OPERTUNE supplied user exit is complete.

\textit{System Action:} None.

\textit{User Response:} None.

BMC31310D  \textit{function ISSUED, R15=code, R0=reason, APPL=applid, CID=token, FCB=value}

\textit{Explanation:} This debugging message indicates that a VTAM function has been issued for the indicated session (\textit{applid}, \textit{token}, and \textit{value}). It also indicates its return codes (\textit{code} and \textit{reason}).

\textit{System Action:} None.

\textit{User Response:} None.

BMC31311D  \textit{function COMPLETED, R15=code, R0=reason, APPL=applid, CID=token, FCB=value}

\textit{Explanation:} This debugging message indicates that the indicated VTAM function has completed for the indicated session (\textit{applid}, \textit{token}, and \textit{value}). It also indicates its return codes (\textit{code} and \textit{reason}).

\textit{System Action:} None.

\textit{User Response:} None.

BMC31313W  \textbf{UNSOLICITED SCIP EXIT INVOCATION}

\textit{Explanation:} The reason for the entry to the VTAM SCIP exit could not be determined.

\textit{System Action:} The SCIP invocation is ignored.

\textit{User Response:} Contact BMC Software Customer Support to determine the cause of the error.

BMC31314I  \textbf{THE SESSION WITH remote HAS TERMINATED}

\textit{Explanation:} The VTAM session used to communicate with the indicated remote OPERTUNE system has terminated.

\textit{System Action:} Communication with the remote session is not possible.

\textit{User Response:} None.
BMC31318E  LOGON REJECTED, APPLID name IS NOT DEFINED LOCALLY

Explanation: A logon request was received from an application ID. The request was rejected because that application ID is not defined to this OPERTUNE.

System Action: The logon request is rejected.

User Response: If communication with the remote OPERTUNE is desired, add a VTAM entry for the application ID in this OPERTUNE’s system profile; and, optionally, use the ADDREMOTE command to dynamically define that remote to the current system.

BMC31321I  TPEND NOTIFICATION RECEIVED, ALL SESSIONS ARE BEING TERMINATED

Explanation: This message is issued in response to a TPEND QUIESCE notification from VTAM.

System Action: OPERTUNE will terminate all sessions and close the VTAM APPLID (ACB).

User Response: None.

BMC31322I  TPEND NOTIFICATION DUE TO SEVERE VTAM ERROR, THE ACB IS BEING CLOSED

Explanation: This message is issued in response to a TPEND CLOSE ACB notification from VTAM.

System Action: OPERTUNE will close the OPERTUNE VTAM ACB.

User Response: None.

BMC31323D  APPL=name, CID=token, PRU=size1, SRU=size2, PROFILE=size3

Explanation: This is a diagnostic message issued by the PLU during the negotiation of a VTAM BIND. It indicates the remote RU with which the bind is occurring as well as the RUSIZEs specified for the PRU, SRU, and in the system profile.

System Action: None.

User Response: None.

BMC31325W  REMOTE OPERTUNE WITH APPLID remote IS INACTIVE OR VTAM RESOURCE UNAVAILABLE

Explanation: This message is issued when an OPERTUNE was unable to establish a session with a remote OPERTUNE. It most likely indicates that the remote OPERTUNE is not currently active.

System Action: None.

User Response: None.
OPERTUNE messages

BMC31327E  value INVALID - MUST BE ‘ALL’ OR LIST OF APPLIDS

Explanation: The command parameters (value) for the OPERTUNE VTAM command are not properly enclosed in open and close parentheses or are not ALL.

System Action: The command is rejected.

User Response: Correct the command to properly specify the command parameters.

BMC31335I  THE SESSION WITH remoteOpertune IS SUCCESSFULLY ESTABLISHED

Explanation: The VTAM sessions between this OPERTUNE and the one indicated by remoteOpertune has been established.

System Action: None.

User Response: None.

BMC31342E  REQUIRED APPLID SPECIFICATION(S) NOT FOUND

Explanation: The VTAM command requires the specification of one or more VTAM application IDs.

System Action: The command is rejected.

User Response: Add the needed VTAM application IDs to the command syntax, and reissue the command.

BMC31343E  THE parm PARAMETER IS REQUIRED FOR THE ADDREMOTE COMMAND

Explanation: The indicated parameter is required for the OPERTUNE VTAM ADDREMOTE command, but it is missing.

System Action: The command is rejected.

User Response: Correct the command syntax to specify the missing required parameter.

BMC31344E  APPLID LIST IS EMPTY

Explanation: The VTAM command requires the specification of one or more VTAM application IDs. None were specified with parentheses.

System Action: The command is rejected.

User Response: Add the needed VTAM application IDs between the parentheses, and reissue the command.
A REMOTE OPERTUNE WITH *type*=*name* ALREADY EXISTS

**Explanation:** A remote OPERTUNE is already defined with the indicated application ID or OPERTUNE (*type*) name (*name*).

**System Action:** The command is rejected.

**User Response:** Correct the command to specify a unique APPLID and OPERTUNE name.

**name** INVALID - THE CURRENT OPERTUNE HAS THAT *type*

**Explanation:** The ADDREMOTE command specified a system or application ID (*name*) that is the same as the one (*type*) that the current OPERTUNE system is using. They must be unique.

**System Action:** The command is rejected.

**User Response:** Change the system name, application ID, or both to that of the desired remote OPERTUNE system, and reissue the command.

**APPL=*name*, CID=*token*, PRU=*size1*, SRU=*size2*, BUFSIZE=*size3***

**Explanation:** This is a diagnostic message issued during the phase two negotiation of a VTAM BIND. It indicates the remote RU with which the bind is occurring as well as the RUSIZEs specified for the PRU, SRU, and final negotiated RUSIZE (*size3*) that will be used.

**System Action:** None.

**User Response:** None.

**APPL=*name*, CID=*token*, PRU=*size1*, SRU=*size2*, PROFILE=*size3***

**Explanation:** This is a diagnostic message issued by the SLU during the negotiation of a VTAM BIND. It indicates the remote RU with which the bind is occurring as well as the RUSIZE specified for the PRU, the RU size specified for the SRU, and the RU size specified in the system profile.

**System Action:** None.

**User Response:** None.
**BMC31355E**  
**NO OPERTUNE SYSTEMS ARE DEFINED through VTAM TO THIS OPERTUNE**

*Explanation:* This message is issued in response to a CONNECT or DISCONNECT command. It indicates that there are no OPERTUNE systems defined through VTAM to connect to or disconnect from.

*System Action:* The command is rejected.

*User Response:* Define one or more remote OPERTUNEs using the ADDREMOTE command. If they do not automatically connect, reissue the command.

**BMC31356E**  
**UNABLE TO PASS action REQUEST ON TO THE VTAM TASK**

*Explanation:* An OPERTUNE VTAM exit was unsuccessful in passing the indicated work request on to the OPERTUNE VTAM task.

*System Action:* The request is ignored.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31357E**  
**OPERTUNE name AT APPLID appl IS NOT USING A VALID PROTOCOL**

*Explanation:* While attempting to establish VTAM communications with the indicated OPERTUNE system, the handshaking protocol was not properly followed by the remote OPERTUNE.

*System Action:* The session with the remote OPERTUNE is not established.

*User Response:* Ensure that the remote OPERTUNE version 3.1.00 or later. If it is not, it must be upgraded in order to communicate with this OPERTUNE system.

**BMC31358E**  
**SCIP EXIT COULD NOT LOCATE SESSION WITH CID=token**

*Explanation:* The OPERTUNE VTAM SCIP exit could not locate the appropriate OPERTUNE control block (token) for the request.

*System Action:* The request is ignored.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31359I**  
**APPLID=appl**

*Explanation:* This message is issued in response to a STATUS command. It indicates that the type of connection to the remote OPERTUNE is through VTAM and that the remote OPERTUNE is using an application ID of appl.

*System Action:* None.

*User Response:* None. Information only.
BMC31360E  name IS NOT A VALID REMOTE APPLID

Explanation: The VTAM command requested an application ID that is not known to this OPERTUNE system.

System Action: The command is rejected.

User Response: Correct the command to specify an application ID that is known to this OPERTUNE system. If necessary, a new one can be added using the ADDREMOTE command.

BMC31361I  APPLID=\text{name}, RUSAGE=\text{size}, ACTIVE SESSIONS=\text{number}

Explanation: This message is issued in response to the STATUS command. It indicates that VTAM communications have been requested. It also indicates the application ID this OPERTUNE system is using, the maximum RUSAGE to use (0 implies no maximum), and the number of remote OPERTUNEs that are up and communicating with this one.

System Action: None.

User Response: None.

BMC31363I  RUSAGE=\text{size}, TYPE=\text{type}, CID=\text{token}, STATE=\text{state}

Explanation: This message is issued in response to the STATUS command. It is issued for each requested remote OPERTUNE system. It indicates the RU size the session is using, the type (PLU or SLU), the VTAM CID token of the remote OPERTUNE, and the current session state (UP, DOWN, STARTING, or STOPPING).

System Action: None.

User Response: None. Information only.

BMC31367W  SESSION WITH \text{applid} IS ALREADY CONNECTED

Explanation: A CONNECT command was issued for the indicated application ID. A valid connection already exists with that application ID.

System Action: Command processing continues.

User Response: None.

BMC31368W  SESSION WITH \text{applid} IS ALREADY DISCONNECTED

Explanation: A DISCONNECT command was issued for the indicated application ID. There is no connection in place with that application ID.

System Action: Command processing continues.

User Response: None.
BMC31369E  VTAM OPERATIONS NOT POSSIBLE, ACB IS NOT OPEN

Explanation: A VTAM command was issued, but this OPERTUNE has not been able to open its VTAM ACB.

System Action: The command is rejected.

User Response: Ensure that a valid application ID has been specified for OPERTUNE to use and that the application ID is active.

BMC31370I  REMOTE OPERTUNE WITH APPLID name DELETED

Explanation: This message is issued in response to a DELREMOTE command. It indicates that the requested remote OPERTUNE definition has been removed.

System Action: None.

User Response: None.

BMC31371E  RECEIVED MESSAGE FROM UNKNOWN VTAM SESSION, CID=token

Explanation: A message was received through VTAM, but OPERTUNE was unable to determine which remote OPERTUNE (token) sent the message.

System Action: The message is discarded.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.

BMC31372E  INVALID REQUEST DATA RECEIVED FROM APPLID name, DATA=value

Explanation: A message was received from the indicated application ID (name), but its data contents (value) did not match a known type.

System Action: The request is ignored.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.

BMC31373E  INVALID REQUEST TYPE RECEIVED FROM APPLID name, REQ=number, SUBTYPE=type

Explanation: A message was received from the indicated application ID, but its request type (number) did not match a known type (type).

System Action: The request is ignored.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.
BMC31374E  UNABLE TO GIVE REQUEST FROM APPLID applIDName TO taskName TASK

Explanation: A work request was received from the indicated application ID, but OPERTUNE was unable to pass the request to the appropriate task. That task is needed to complete the work request.

System Action: The work request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.

BMC31375E  UNKNOWN COMMAND TYPE (type) RECEIVED

Explanation: An unknown command type (other than START, STOP, or MODIFY) was received from an MVS console.

System Action: The console request is not processed.

User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31376I  TERMINATING DUE TO STOP COMMAND

Explanation: OPERTUNE is terminating in response to a STOP command.

System Action: OPERTUNE termination begins.

User Response: None.

BMC31377E  UNABLE TO HONOR STOP COMMAND

Explanation: The stop request was rejected by the initialization/termination task.

System Action: OPERTUNE rejects the STOP command.

User Response: Determine if a previous message (abend or error) indicates why the command was rejected. If none are found, contact BMC Software Customer Support to determine the cause of the rejection.

BMC31378E  UNABLE TO ESTABLISH COMMUNICATIONS REQUEST

Explanation: An OPERTUNE internal error occurred.

System Action: OPERTUNE is unable to accept console commands.

User Response: Contact BMC Software Customer Support to determine the cause of the error.
**BMC31379E**  QEDIT FAILURE, RC=returnCode

*Explanation:* While attempting to establish operator console communications, the QEDIT macro returned an non zero return code.

*System Action:* OPERTUNE terminates.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31380W**  FORCED TASK TERMINATION REQUEST RECEIVED FOR THE *task*

*Explanation:* After a STOP command had been received by OPERTUNE, a subsequent STOP command was received. This causes OPERTUNE to abend the current task undergoing termination.

*System Action:* The currently terminating task is abended.

*User Response:* If the subsequent STOP command was inadvertent, no response is necessary. If it was because of a failure of OPERTUNE to properly terminate, contact BMC Software Customer Support to determine the cause of the failure.

**BMC31381I**  FORCED TASK TERMINATION REQUEST PROCESSED

*Explanation:* The current task undergoing termination received the force termination request.

*System Action:* OPERTUNE termination continues.

*User Response:* None.

**BMC31408E**  RECORD HAS AN INVALID TYPE SPECIFIED IN COLUMN 1 (*type*)

*Explanation:* The API diagnostic utility was given an invalid input statement.

*System Action:* The request is ignored.

*User Response:* Contact BMC Software Customer Support to determine the proper specification.

**BMC31409I**  STATUS CHECK TYPE *number* COMPLETED, RC=returnCode

*Explanation:* The API diagnostic utility completed the requested statement with the indicated return code.

*System Action:* None.

*User Response:* None. Information only.

**BMC31410I**  OPERTUNE version, PROFILE PRINT LOG

*Explanation:* This message indicates the beginning of the profile print utility’s output.

*System Action:* None.

*User Response:* None.
**BMC31411E**  
**ERROR OPENING ddname - DDNAME MISSING OR INVALID**

*Explanation:* The ddname indicated was not specified in the utility. It is required for the utility to run.

*System Action:* The utility is terminated.

*User Response:* Alter the JCL to contain the required ddname, then resubmit the JCL.

**BMC31412E**  
**ddname INVALID - RECORD FORMAT MUST BE FIXED**

*Explanation:* The ddname indicated does not have a fixed record format. This is required for the utility to run.

*System Action:* The utility is terminated.

*User Response:* Change the JCL to correct the ddname, then resubmit the JCL.

**BMC31413E**  
**ddname HAS AN INVALID LRECL**

*Explanation:* The ddname indicated does not have the proper logical record length. Input files require an LRECL of 80 and output files require an LRECL (logical record length) of 121.

*System Action:* The utility is terminated.

*User Response:* Change the JCL to correct the ddname, then resubmit the JCL.

**BMC31414E**  
**ddname INVALID - DSORG MUST BE PS OR PO**

*Explanation:* The ddname indicated does not have the proper data set organization. It must be either sequential or partitioned.

*System Action:* The utility is terminated.

*User Response:* Change the JCL to correct the ddname, then resubmit the JCL.

**BMC31415I**  
**OPERTUNE version, BATCH COMMAND LOG**

*Explanation:* This message indicates the beginning of the batch utility’s output.

*System Action:* None.

*User Response:* None.

**BMC31416E**  
**value INVALID, PARM FIELD MUST BE EMPTY OR ‘VALIDATE’**

*Explanation:* The PARM field for the batch utility contained an invalid value. It must contain the word VALIDATE or nothing at all.

*System Action:* The batch utility terminates.

*User Response:* Correct the JCL to specify VALIDATE or nothing at all in the PARM field.
BMC31417E  RETURN CODE code ENCOUNTERED READING SYSIN

Explanation: An unexpected error occurred while attempting to read the SYSIN file. This file is needed for the utility to continue.

System Action: The utility terminates.

User Response: Check the JCL to ensure that the SYSIN file refers to a valid input file, and rerun the job.

BMC31418E  UNABLE TO LOAD INTERFACE MODULE (DDTKINTF)

Explanation: The batch utility was unable to load the required OPERTUNE interface module.

System Action: The batch utility terminates.

User Response: Check the JCL to ensure that the OPERTUNE load library is in either the STEPLIB, JOBLIB, or LINKLIST concatenation, and rerun the job.

BMC31419E  EXPECTED CONTINUATION NOT FOUND

Explanation: The last statement in the SYSIN file indicated that it was continued on the next input record. No additional record was found.

System Action: The last statement is discarded.

User Response: Correct the input to add any needed continuation, and rerun the job.

BMC31420E  OPERTUNE SYSTEM NOT AVAILABLE TO PROCESS COMMAND

Explanation: An OPERTUNE system is not up to process the batch utility command.

System Action: The command is rejected.

User Response: Start the required OPERTUNE system, and rerun the job.

BMC31421I  OPERTUNE version, BATCH PROFILE MIGRATION UTILITY LOG

Explanation: This message indicates the beginning of the batch profile migration utility’s output.

System Action: None.

User Response: None.
**BMC31422E**  INVALID INPUT PROFILE DSN, KEYLEN=len, OFFSET=num, LRECL=size

Explanation: The batch profile migration utility detected an invalid input KSDS profile data set. The input data set must be an initialized OPERTUNE profile data set.

System Action: The utility terminates without migrating any records.

User Response: Correct the JCL to refer to a valid OPERTUNE profile data set, and rerun the job.

**BMC31423I**  OPERTUNE version, CONTROL BLOCK VALIDATION UTILITY LOG

Explanation: This message indicates the beginning of the control block validation utility’s output.

System Action: None.

User Response: None.

**BMC31424I**  OPERTUNE version, APAR MAINTENANCE UTILITY LOG

Explanation: This message indicates the beginning of the APAR maintenance utility’s output.

System Action: None.

User Response: None.

**BMC31425I**  XCF GROUP NAME NOT SPECIFIED -- XCF OPERATIONS NOT POSSIBLE

Explanation: This OPERTUNE attempted to join an XCF group to communicate with other OPERTUNEs, but the system profile record for this OPERTUNE failed to specify an XCF group name.

System Action: XCF communication between OPERTUNEs is not available.

User Response: If you want XCF communication, specify an XCF group name on the system profile for this OPERTUNE and try again.

**BMC31426E**  function FAILED, RC=returnCode, REASON=reasonCode, GROUP=name, MEMBER=mem

Explanation: The indicated XCF function failed.

System Action: XCF communication between OPERTUNE systems is not available.

User Response: Make sure valid XCF values were specified on the System Profile record for this OPERTUNE. Refer to the IBM Sysplex Services Reference manual for an explanation of the return and reason codes.
**BMC31427W**  

**name IS A RESERVED XCF GROUP NAME**

*Explanation:* The XCF group name OPERTUNE is using is reserved by IBM. Reserved names begin with the letters A through I or SYS.

*System Action:* None.

*User Response:* Edit the OPERTUNE system profile and change the XCF group name to one that is not reserved by IBM.

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**BMC31428E**  

**IXCMSGO FAILED, TARGET=system, RC=returnCode, REASON=reasonCode**

*Explanation:* An OPERTUNE XCF task invocation of the IXCMSGO macro has failed.

*System Action:* XCF communication between OPERTUNEs fails for the current request.

*User Response:* Refer to the IBM *Sysplex Services Reference* manual for an explanation of the return and reason codes.

---

**BMC31429I**  

**XCF COMMUNICATIONS ESTABLISHED, GROUP=grpName, MEMBER=memName**

*Explanation:* OPERTUNE has successfully established itself within the XCF group as requested in the OPERTUNE system profile.

*System Action:* OPERTUNE system initialization continues.

*User Response:* None.

---

**BMC31430E**  

**MESSAGE RECEIVED FROM UNKNOWN MEMBER, TOKEN=token**

*Explanation:* The XCF message exit could not determine where the request came from.

*System Action:* The message is discarded.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

---

**BMC31431E**  

**ERROR PROCESSING RESPONSE FROM member, UNABLE TO FIND TOKEN token**

*Explanation:* A response was received through XCF, but OPERTUNE was unable to locate the original request that the response is for.

*System Action:* The response is discarded.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.
**BMC31432E** IXCMSGI FAILED, **TOKEN=token, RC=returnCode, REASON=reasonCode**

*Explanation:* The OPERTUNE XCF message exit received an error attempting to retrieve a message from XCF. The return and reason codes listed are from the IXCMSGI macro.

*System Action:* The message is ignored.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31435E** INVALID REQUEST DATA RECEIVED FROM **name, DATA=value**

*Explanation:* A message was received through XCF from the indicated OPERTUNE system, but its data contents did not match a known type.

*System Action:* The request is ignored.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31436E** INVALID REQUEST TYPE RECEIVED FROM **opertuneID, REQ=num, SUBTYPE=type**

*Explanation:* A message was received through XCF from the indicated OPERTUNE system, but its request type did not match a known type.

*System Action:* The request is ignored.

**BMC31437E** UNABLE TO GIVE REQUEST FROM **opertuneID TO target TASK**

*Explanation:* A work request was received through XCF from a remote OPERTUNE system, but OPERTUNE was unable to pass the request to the appropriate task (*target*). That task is needed to complete the work request.

*System Action:* The work request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31438I** REMOTE **type name state AT MEMBER name**

*Explanation:* The OPERTUNE at the specified XCF member (*name*) has indicated that the type (*type*) named *name* has changed to the indicated state.

*System Action:* None.

*User Response:* None.
**BMC31439E**  UNABLE TO ADD WORK REQUEST TO THE XCF TASK, MESSAGE LOST

*Explanation:* An OPERTUNE XCF exit was unsuccessful in passing a work request to the OPERTUNE XCF task.

*System Action:* The request is ignored.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

---

**BMC31440I**  XCF GROUP NAME=\textit{name}, MEMBER NAME=\textit{member}, TOKEN=\textit{token}

*Explanation:* This message is issued in response to the STATUS command. It indicates that XCF communications have been requested. It also indicates the XCF group this OPERTUNE system is using, its XCF member name, and its XCF member token.

*System Action:* None.

*User Response:* None. Information only.

---

**BMC31441I**  XCF MEMBER NAME=\textit{member}, TOKEN=\textit{token}

*Explanation:* This message is issued in response to the STATUS command. It is issued for each requested remote OPERTUNE system. It indicates the XCF member name of the remote and its XCF member token.

*System Action:* None.

*User Response:* None. Information only.

---

**BMC31442E**  REMOTE OPERTUNE NAMED \textit{name}, TOKEN=\textit{token}, ALREAD EXISTS

*Explanation:* An attempt was made to add the definition of a remote OPERTUNE system (\textit{name}) that was already defined.

*System Action:* The new system addition is ignored.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

---

**BMC3143D**  XCF TASK PROCESSED WRECODE = \textit{code}

*Explanation:* OPERTUNE has processed the internal work request element shown.

*System Action:* Processing continues.

*User Response:* None. Information only.
OPERTUNE messages

BMC31450I TASK=\textit{id}, NAME=\textit{loadModule}

\textit{Explanation}: This message is issued in response to the TASKS command. It is issued for each OPERTUNE task. It indicates the function (\textit{id}) and load module name of the OPERTUNE task.

\textit{System Action}: None.

\textit{User Response}: None. Information only.

BMC31451I TASK IS WAITING FOR WORK

\textit{Explanation}: This message is issued in response to the TASKS command. It indicates that the task identified by the previous BMC31450I message is idle and waiting for a new work request.

\textit{System Action}: None.

\textit{User Response}: None.

BMC31452I TASK IS WAITING FOR THE \textit{id} TASK TO COMPLETE THE FOLLOWING REQUEST

\textit{Explanation}: This message is issued in response to the TASKS command. It indicates that the task identified by the previous BMC31450I message is waiting for another task (\textit{id}) to complete the request that follows.

\textit{System Action}: None.

\textit{User Response}: None.

BMC31453I TASK IS PROCESSING A WORK REQUEST

\textit{Explanation}: This message is issued in response to the TASKS command. It indicates that the task identified by the previous BMC31450I message is busy processing a work request. Information regarding that work request is in subsequent messages.

\textit{System Action}: None.

\textit{User Response}: None.

BMC31454I TASK IS IN AN UNKNOWN STATE

\textit{Explanation}: This message is issued in response to the TASKS command. It indicates that the task identified by the previous BMC31450I message is in an undetermined state.

\textit{System Action}: None.

\textit{User Response}: None.
BMC31455I  CURRENT WORK REQUEST:

Explanation: This message is issued in response to the TASKS command. It indicates that the task identified by the previous BMC31450I message is actively working on the request listed in the following message.

System Action: None.
User Response: None.

BMC31456I  PENDING WORK REQUEST(S):

Explanation: This message is issued in response to the TASKS command. It indicates that the task identified by the previous BMC31450I message has more work requests to process after the current request is completed. Those work requests are listed in subsequent messages.

System Action: None.
User Response: None.

BMC31457I  REQUEST TYPE= function

Explanation: This message is issued in response to the TASKS command. It indicates a work request (function) that is assigned to the task identified by the previous BMC31450I message.

System Action: None.
User Response: None.

BMC31458I  COMMAND= text

Explanation: This message is issued in response to the TASKS command. It follows a BMC31457I message when that message indicates that the request is a command (text).

System Action: None.
User Response: None.

BMC31475W  DDTNAME name IS MISSING

Explanation: The indicated ddname is missing from the OPERTUNE started task JCL. This prevents OPERTUNE from using that file.

System Action: OPERTUNE initialization continues.
User Response: Update the OPERTUNE started task JCL to add the requested DD name.
BMC31476W  THE LOG FILE WILL NOT BE USED, OPEN FAILED

Explanation: OPERTUNE was unable to open the audit log file (ddname DDTLOG).

System Action: The subsystem modifications are not logged into the audit file.

User Response: Check the DDTLOG ddname in the OPERTUNE JCL to ensure that it refers to a valid audit log data set. For more information about valid audit log data sets, refer to the diagnostic procedures in the OPERTUNE Reference Manual.

BMC31477W  THE LOG FILE WILL NOT BE USED, RECFM MUST BE FIXED

Explanation: OPERTUNE was unable to use the audit log file (ddname DDTLOG) as the indicated data set does not have the required fixed (or fixed block) record format.

System Action: The subsystem modifications are not logged into the audit file.

User Response: Change the DDTLOG ddname in the OPERTUNE JCL to refer to a valid audit log data set. For more information about valid audit log data sets, refer to the diagnostic procedures in the OPERTUNE Reference Manual.

BMC31478W  THE LOG FILE WILL NOT BE USED, LRECL MUST BE 121

Explanation: OPERTUNE was unable to use the audit log file (ddname DDTLOG) as the indicated data set does not have the required logical record length (121).

System Action: The subsystem modifications are not logged into the audit file.

User Response: Change the DDTLOG ddname in the OPERTUNE JCL to refer to a valid audit log data set. For more information about valid audit log data sets, refer to the diagnostic procedures in the OPERTUNE Reference Manual.

BMC31479E  FAILED TO CLOSE THE LOG FILE FOR name

Explanation: OPERTUNE was unable to close the audit log file for the indicated system (name).

System Action: OPERTUNE termination continues.

User Response: Check the OPERTUNE started task JCL to ensure that the system’s DD name refers to a valid audit log data set.

BMC31481W  SYS code ABEND, name LOG FILE NOT USED ANY MORE

Explanation: An abend (code) occurred while attempting to write to the audit log file.

System Action: The audit log file is no longer used.

User Response: Check the abend code to determine the cause of the problem. This is usually issued in response to a data set being unable to expand type of abend (Sx37).
BMC31482W  THE LOG FILE WILL NOT BE USED, MUST BE SEQUENTIAL

Explanation: OPERTUNE was unable to use the audit log file (ddname DDTLOG) as the indicated data set does not have the required data set organization (PS).

System Action: The subsystem modifications are not logged into the audit file.

User Response: Change the DDTLOG ddname in the OPERTUNE JCL to refer to a valid audit log data set. For more information about valid audit log data sets, refer to the diagnostic procedures in the OPERTUNE Reference Manual.

BMC31483I  THERE ARE NO MESSAGES CURRENTLY IN THE HISTORY LOG

Explanation: This message is issued in response to a HISTORY command. No subsystem modifications have been made by this OPERTUNE since it was started.

System Action: None.

User Response: None.

BMC31484I  ************ BEGINNING OF HISTORY MESSAGES ************

Explanation: This message is issued in response to a HISTORY command. The history messages follow this message.

System Action: Command processing continues.

User Response: None.

BMC31485I  ************* END OF HISTORY MESSAGES **************

Explanation: This message is issued in response to a HISTORY command. The history messages precede this message.

System Action: Command processing continues.

User Response: None.

BMC31486I  OPERTUNE version, type LOG FOR SYSTEM name, TIME: timestamp

Explanation: This is an informational message placed at the beginning of an OPERTUNE log (the type of log is indicated by type). It indicates the OPERTUNE version, the OPERTUNE name, and the time at which it started.

System Action: None.

User Response: None. Information only.
**BMC31487E**  LOG ALLOCATION FAILED - RC=code

*Explanation:* The ALTER LOG command was unable to successfully allocate the requested audit log. The error or information codes returned from the dynamic allocation are reported.

*System Action:* The command is rejected, and the previous audit log (if any) will continue to be used.

*User Response:* Examine the meaning of the error/info codes in the MVS/ESA System Programming Library: Application Development Guide or MVS/XA System Programming Library: System Macros and Facilities Volume 1 to determine the cause of the dynamic allocation error.

**BMC31488I**  LOG FILE SUCCESSFULLY ALLOCATED

*Explanation:* The ALTER LOG command has successfully allocated the indicated new log file, closed the previous one (if any), and opened the new log file.

*System Action:* OPERTUNE begins using the new audit log.

*User Response:* None. Information only.

**BMC31489I**  FROM: userID, AT: location, TIME: time stamp

*Explanation:* This message is used to delimit commands in the audit log or logs. It indicates the user who issued the command, which OPERTUNE system the command came from (location), and the time at which the command was completed.

*System Action:* None.

*User Response:* None.

**BMC31490E**  SYS code ABEND, OPERTUNE IS NOT AUTHORIZED TO ACCESS name LOG FILE

*Explanation:* The OPERTUNE system (code) is not authorized to access the indicated audit log specified in the OPERTUNE JCL.

*System Action:* The commands will not be logged.

*User Response:* Change the OPERTUNE JCL to refer to a file which the OPERTUNE job is authorized to update, or update the authorization of the OPERTUNE job to be able to update the current data set.

**BMC31500I**  ACCEPTING WORK REQUESTS FOR DB2ssid

*Explanation:* This message is issued for each DB2 subsystem that this OPERTUNE system controls. It indicates that the OPERTUNE system will accept modification commands for the indicated DB2 subsystem.

*System Action:* OPERTUNE will now accept modifier commands for this DB2 subsystem.

*User Response:* None. Information only.
BMC31501I  **NOT ACTIVE - result**

*Explanation:* A subsystem modify request was issued, but the target subsystem is not active.

*System Action:* If the modifier request was a SET, *result* will be REQUEST DEFERRED, indicating that the modification will be installed in the target subsystem after it starts. If the modifier request was a RESET, *result* will be REQUEST COMPLETE, indicating that the RESET request is complete and it did not require a change to the target subsystem since it was not up.

*User Response:* None.

BMC31503E  **THE SUM(nnn) OF MAX THREADS lokal) AND REMOTES(remote) EXCEEDS THE MAXIMUM(nnn)**

*Explanation:* For the SET MAXTHDS command, the total of the maximum local and remote threads exceeded the maximum allowed for this release of DB2.

*System Action:* The command is rejected.

*User Response:* Correct the command to lower the maximum local or remote threads so that their sum does not exceed the maximum allowed.

BMC31504W  **elementField IS NOT APPLICABLE AT THE CURRENT DB2 RELEASE LEVEL (release)**

*Explanation:* The target subsystem’s release level does not support the requested element’s parameter (*elementField*). The subsystem modification request for this parameter, therefore, would have no effect.

*System Action:* The command is rejected.

*User Response:* None. Information only.

BMC31505I  **COMMAND ORIGINATED IN GROUP name**

*Explanation:* This message indicates that the change request being documented was implemented when the group (*name*) was set.

*System Action:* None.

*User Response:* None.

BMC31506E  **feature IS NOT APPLICABLE AT THE CURRENT DB2 RELEASE LEVEL (release)**

*Explanation:* The release level of the target DB2 subsystem does not support the requested feature; therefore, the subsystem modification request will have no effect.

*System Action:* The command is rejected.

*User Response:* None.
BMC31507I COMMAND ORIGINATED IN GROUP group, SET BY SCHEDULE schedule

Explanation: The change request being documented was implemented when the group was set as part of the schedule.
System Action: None.
User Response: None.

BMC31508E type NAME NOT SPECIFIED

Explanation: The GROUP or SCHEDULE name (type) was expected after the open parenthesis, but the end of the command was found instead.
System Action: The command is rejected.
User Response: Correct the command syntax to indicate the desired group or schedule name followed by a close parenthesis.

BMC31509E type name IS ALREADY SET

Explanation: This message is issued in response to a SET GROUP or SET SCHEDULE command. It indicates that a SET has already been issued for the specified profile (name).
System Action: The command is rejected.
User Response: If the GROUP or SCHEDULE has not been modified, no action is necessary. If it has, issue a RESET command for the entry, followed by a SET command to implement the changes.

BMC31510I GROUP name HAS NO CHANGES IN EFFECT

Explanation: This message is issued in response to a QUERY command. It indicates that the group being displayed (name) did not have any elements implemented when it was set.
System Action: None.
User Response: None. Information only.

BMC31514I CURRENT SLOT IN SCHEDULE name SPECIFIES NO GROUP

Explanation: The time period for the current time of day in the specified schedule (name) indicates that there should not be a group implemented now.
System Action: None.
User Response: None. Information only.
OPERTUNE messages

**BMC31517W**

**ALL TIME PERIODS FOR SCHEDULE name ARE IDENTICAL**

*Explanation:* While attempting to determine the time at which to switch groups for the indicated schedule, OPERTUNE determined that all time periods in the schedule request the same group (or no groups). This indicates that there are no automated changes for this schedule.

*System Action:* None.

*User Response:* Decide if this is the desired result.

**BMC31518E**

**UNABLE TO ADD TIMER FOR NEXT SCHEDULE REQUEST**

*Explanation:* An OPERTUNE internal error has occurred. OPERTUNE was unable to set the timer request for the next group change as specified in the schedule.

*System Action:* Subsequent group changes are not implemented as specified in the schedule.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31520E**

**GROUP name DOES NOT EXIST**

*Explanation:* The group specified in a SET GROUP command is not the name of a valid group profile.

*System Action:* The command is rejected.

*User Response:* Correct the group name to specify the name of a valid group profile, or add a new group through the group dialog.

**BMC31521E**

**MUST RESET THE profile TO RESET THE request**

*Explanation:* The request currently in effect is the result of a SET profile request for the indicated profile. In this case, a RESET profile command is required to reset the request.

*System Action:* The command is rejected.

*User Response:* If the request changes need to be reset, change the command to a RESET profile command.

**BMC31523E**

**INVALID command TYPE - (type)**

*Explanation:* The SET or RESET command specified an invalid SET or RESET type (element, group, and so on).

*System Action:* The command is rejected.

*User Response:* Change the command to specify a valid command type.
BMC31524E  TOO MANY PARAMETERS FOR element

Explanation: The command contained more positional parameters that the element allows.

System Action: The command is rejected.

User Response: Change the command to specify the proper number of positional parameter for the element.

BMC31525E  NO PARAMETERS SPECIFIED

Explanation: The command request contained a parameter list in which none of the positional parameters were specified (() or (,)).

System Action: The command is rejected.

User Response: Change the command to specify at least one of the positional parameters for the element.

BMC31526W  GROUP SET FOR element SUPPRESSED DUE TO ELEMENT REQUEST

Explanation: The set element request contained in the group profile was not implemented because of an outstanding individual set element request.

System Action: The set is not implemented until the individual set element is reset.

User Response: Determine if the individual set element request is still needed or not. If not, issue a reset command for that element.

BMC31527E  ELEMENT name NOT YET SUPPORTED

Explanation: Support for modifying the indicated element has not yet been implemented.

System Action: The command is rejected.

User Response: Contact BMC Software Customer Support to determine when support for the requested element will be implemented.

BMC31528E  value INVALID - EXPECTING NUMERIC VALUE

Explanation: The parameter field where the indicated value was specified is required to contain an unsigned numeric value.

System Action: The command is rejected.

User Response: Correct the command to specify an unsigned numeric value.
### BMC31529E

**value INVALID - field MUST BE BETWEEN minimum AND maximum**

*Explanation:* The numeric parameter field where the indicated value was specified is not in the acceptable range. The parameter field designated by field must be between the indicated minimum and maximum values.

*System Action:* The command is rejected.

*User Response:* Correct the command to specify an unsigned numeric value within the designated range.

### BMC31530W

**field ALREADY SET TO value**

*Explanation:* The value specified for the element parameter designated by field is already in effect in the target subsystem.

*System Action:* The field remains unchanged.

*User Response:* None. Information only.

### BMC31531I

**field CHANGED FROM value1 TO value2**

*Explanation:* The element parameter designated by field has been changed from its previous value (value1) to the requested value (value2).

*System Action:* Command processing continues.

*User Response:* None. Information only.

### BMC31532E

**type IS NOT CURRENTLY MODIFIED**

*Explanation:* The QUERY or RESET command specified a type (element, GROUP, or SCHEDULE) that is not currently modified by OPERTUNE.

*System Action:* The command is rejected.

*User Response:* Change the command to specify a type that is currently modified.

### BMC31533I

**INSTALLING SUPPRESSED GROUP REQUEST FOR element**

*Explanation:* The current individual element request that is being reset previously suppressed a group element request for the same element. The group element request is now being installed because the individual element request is being removed.

*System Action:* The group element request is installed.

*User Response:* None. Information only.
BMC31535I  
**field** VALUE LEFT AT **value** DUE TO ‘NORESET’ REQUEST  

*Explanation:* The RESET request is not resetting the field back to its original ZPARM value because the SET command that changed it specified the NORESET parameter. This tells OPERTUNE to leave it as is during reset.  
*System Action:* The field is not modified from its current value.  
*User Response:* None.

BMC31536I  
**command** SCHEDULE FOR **time**  

*Explanation:* The indicated command is scheduled to be issued at the indicated time as a result of the SET SCHEDULE command.  
*System Action:* None.  
*User Response:* None. Information only.

BMC31537W  
THREAD/CONNECTION NOT CANCELLABLE NOW - TRY AGAIN LATER  

*Explanation:* OPERTUNE was unable to catch the requested thread or connection in a state of execution that is needed to cancel it. The most common cause is if the thread or connection was holding DB2 resources or was in a critical state. OPERTUNE made numerous attempts to catch the thread or connection in the proper state.  
*System Action:* The cancel command is rejected.  
*User Response:* Reissue the command after a short delay.

BMC31538W  
**command** - ISSUED ASYNCHRONOUSLY  

*Explanation:* The indicated command was issued asynchronously. The desired effect of the command might or might not be complete at this time.  
*System Action:* Command processing continues.  
*User Response:* The audit log will be updated when the asynchronous command has completed.

BMC31539W  
**bufferPool** IS NOT ALLOCATED - UNABLE TO CHANGE ITS PREFETCH VALUE  

*Explanation:* The prefetch modification for the indicated buffer pool has been rejected because the buffer pool is not currently in use. The prefetch values are implemented in DB2 control blocks that exist only when the buffer pool is in use by having one or more open table spaces in it.  
*System Action:* The command request is rejected.  
*User Response:* None.
<table>
<thead>
<tr>
<th>Message Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC31541E</td>
<td><strong>ABEND code OCCURRED ATTEMPTING TO action field</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> An attempt to perform the indicated action for the indicated field ended with an unrecoverable abend. This message is usually preceded by messages 31060 through 31070, which provide a more detailed description of the abend.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> How much of the requested change is implemented depends upon how far the change logic proceeded before the abend occurred.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> Try to issue a RESET command for the element to get things back to the original values. Contact BMC Software Customer Support to determine the cause of the error.</td>
</tr>
<tr>
<td>BMC31546W</td>
<td><strong>TABLE SPACE catalog, database, tableSpace, partition HAS NO USERS</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> A request was made to free a table space but the table space did not have any threads currently accessing it.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> Command processing continues.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> None. Information only.</td>
</tr>
<tr>
<td>BMC31548I</td>
<td><strong>subsystem IS NOT UP</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> A QUERY command was issued to the indicated DB2 subsystem, but the DB2 subsystem is not up.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> Command processing continues.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> None. Information only.</td>
</tr>
<tr>
<td>BMC31549I</td>
<td><strong>NO CHANGE REQUESTS RECEIVED</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> This informational message is issued in response to a QUERY ALL command when there are no current modifications to the target DB2 system.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> Command processing continues.</td>
</tr>
<tr>
<td>BMC31550I</td>
<td><strong>NORESET OPTION IS IN EFFECT FOR THIS COMMAND</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> This message is issued in response to a QUERY command. It indicates that the SET command that changed this field had the NORESET parameter specified. This means that a subsequent RESET will leave the field at its current value.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> None.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> None.</td>
</tr>
</tbody>
</table>
**BMC31551I**  
**COMMAND TEXT:** string

*Explanation:* This message is issued in response to a QUERY command. It indicates the command that caused the changes shown in subsequent messages.

*System Action:* None.

*User Response:* None. Information

---

**BMC31552W**  
**IT HAS BEEN CHANGED OUTSIDE OF OPERTUNE TO value**

*Explanation:* This message is issued in response to a QUERY command. It indicates that a field’s request to change the value for the indicated element field has been received, value has changed since the last time OPERTUNE changed it.

*System Action:* None.

*User Response:* If the value should be what OPERTUNE last set it to, reissue the OPERTUNE command that last changed it.

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**BMC31553I**  
**elementField CHANGE TO value IS SUPPRESSED**

*Explanation:* This message is issued in response to a QUERY command when a request to change the value in an element field has been overridden by either an individual element request or a previous group request for this element.

*System Action:* Command processing continues.

*User Response:* None. Information only.

---

**BMC31554I**  
**elementField UNCHANGED AT value**

*Explanation:* A request to change the value for the indicated element field has been received, but it was determined that the field was already set to the indicated value.

*System Action:* Command processing continues.

*User Response:* None. Information only.

---

**BMC31555I**  
**elementField HAS BEEN CHANGED FROM value1 TO value2**

*Explanation:* A request to change the value for the indicated element field has been received and the original ZPARM value (*value1*) has been changed to (*value2*).

*System Action:* Command processing continues.

*User Response:* None. Information only.
BMC31556I  *elementField WILL BE CHANGED TO value*

*Explanation:* A request to change the value for the indicated element field has been received, and the value will be changed as soon as the target subsystem is started.

*System Action:* Command processing continues.

*User Response:* None.

BMC31561E  **NO QUALIFIERS SPECIFIED**

*Explanation:* The CANCEL command did not contain any qualifier specifiers needed to determine the thread/connection to be cancelled.

*System Action:* The command request is rejected.

*User Response:* Correct the cancel request to specify at least one qualifier specifier.

BMC31562E  **MULTIPLE THREADS/CONNECTIONS (num) MATCH SPECIFICATIONS**

*Explanation:* The CANCEL command’s qualifier specifications were not specific enough to narrow the thread or connection to be cancelled down to just one candidate. The indicated number of threads or connections (*num*) met the command’s specifications.

*System Action:* The command request is rejected.

*User Response:* Correct the cancel request to specify additional qualifier specifiers to further qualify the request.

BMC31563E  **NO THREADS/CONNECTIONS MATCH SPECIFICATIONS**

*Explanation:* The CANCEL command’s qualifier specifications did not match those of any active threads/connections in the target subsystem.

*System Action:* The command request is rejected.

*User Response:* Correct the cancel request to specify a valid thread/connection.

BMC31565E  **verb REJECTED - SUBSYSTEM IS NOT UP**

*Explanation:* An operational assist command (*verb*) was issued but the target subsystem was not up. All operational assist commands require that the target subsystem be up for execution.

*System Action:* The command request is rejected.

*User Response:* Resubmit the operational assist command after the target DB2 subsystem is up.
**BMC31566E**  **FAILURE OCCURRED SCHEDULING THE function**

*Explanation:* An unexpected failure occurred while attempting to schedule the routine necessary to complete the request (indicated by function).

*System Action:* The command request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the failure.

**BMC31567I**  **THREAD/CONNECTION SUCCESSFULLY CANCELLED BY OPERTUNE**

*Explanation:* The thread/connection specified by the CANCEL command has been successfully cancelled.

*System Action:* Command processing continues.

*User Response:* The thread/connection should terminate as soon as all outstanding resource requests have been satisfied and DB2 performs any rollback processing that may be needed for the thread/connection.

**BMC31568W**  **THREAD/CONNECTION ALREADY TERMINATING**

*Explanation:* The thread/connection specified by the CANCEL command is already undergoing termination processing (most likely rollback).

*System Action:* Command processing continues.

*User Response:* None.

**BMC31569E**  **function ENCOUNTERED AN UNKNOWN RETURN CODE (code)**

*Explanation:* An unanticipated error (code) was returned by the indicated function (function). The status of the request is unknown.

*System Action:* Command processing terminates.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31571E**  **USER IS NOT AUTHORIZED FOR element ELEMENT**

*Explanation:* The requester is not authorized to change the indicated element (element).

*System Action:* The command is rejected.

*User Response:* Contact your OPERTUNE administrator to obtain the desired authorization.
**BMC31573E**  
*value INVALID - field MUST BE EITHER 'opt1' OR 'opt2'*  

**Explanation:** The specified field (field) contains an invalid value (value). The value must be either opt1 or opt2.

**System Action:** The command request is rejected.

**User Response:** Change the set element field containing the error to one of the values designated in range.

---

**BMC31574E**  
*value INVALID FOR THE field PARAMETER*  

**Explanation:** The specified element field (field) contains an invalid value (value).

**System Action:** The command request is rejected.

**User Response:** Change the set element field containing the error to a valid value.

---

**BMC31575E**  
*string INVALID FOR field - 1st MUST BE ALPHA, THE REST ALPHANUMERIC AND/OR NATIONAL*  

**Explanation:** The indicated string (string) is invalid. The first character must be alphabetic or a national character. All subsequent characters must be alphanumeric or national characters.

**System Action:** The command request is rejected.

**User Response:** Correct the command syntax to specify a string that meets the required standards.

---

**BMC31576E**  
**INSUFFICIENT STORAGE EXISTS FOR type EXPANSION**

**Explanation:** The target subsystem's address space did not contain sufficient extended private storage to complete the expansion request. OPERTUNE requires that at least 10 MB of extended private space be available after the expansion is complete.

**System Action:** The type expansion request is rejected.

**User Response:** Respecify the type expansion request with a lower amount, or increase the amount of virtual storage available to the DBM address space during the next scheduled DB2 outage.

---

**BMC31578E**  
**RLIMIT SPECIFICATION (value) MUST BE ALPHANUMERIC OR '--'**

**Explanation:** The RLIMIT value specified was not alphanumeric or --. RLIMIT table suffixes must be alphanumeric. A value of -- is allowed to issue a -STOP RLIMIT command.

**System Action:** The command request is rejected.
<table>
<thead>
<tr>
<th>Code</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC31582E</td>
<td><strong>unit IS AN INVALID UNIT NAME IN THIS INSTALLATION</strong></td>
</tr>
<tr>
<td></td>
<td><em>Explanation:</em> A request was made to change the archive unit name (ARCUNIT) to a unit name (unit) that is not defined to this MVS system.</td>
</tr>
<tr>
<td></td>
<td><em>System Action:</em> The command request is rejected.</td>
</tr>
<tr>
<td></td>
<td><em>User Response:</em> Change the set archive unit name parameter to that of a valid unit name for the current MVS system.</td>
</tr>
<tr>
<td>BMC31585E</td>
<td><strong>name IS AN INVALID DATA SET NAME</strong></td>
</tr>
<tr>
<td></td>
<td><em>Explanation:</em> The data set name specified in the add or remove log command (name) is not a valid data set name.</td>
</tr>
<tr>
<td></td>
<td><em>System Action:</em> The command request is rejected.</td>
</tr>
<tr>
<td></td>
<td><em>User Response:</em> Correct the command to contain the name of a valid data set.</td>
</tr>
<tr>
<td>BMC31586E</td>
<td><strong>THE ACTIVE LOG dataSet NAMES MUST BE DIFFERENT</strong></td>
</tr>
<tr>
<td></td>
<td><em>Explanation:</em> Both data set names in the add or remove log command specified the same data set. The copy 1 and copy 2 log data sets must be unique.</td>
</tr>
<tr>
<td></td>
<td><em>System Action:</em> The command request is rejected.</td>
</tr>
<tr>
<td></td>
<td><em>User Response:</em> Correct the command to contain the name of unique data sets.</td>
</tr>
<tr>
<td>BMC31588E</td>
<td>**DYNAMIC ALLOCATION FAILED FOR DSN=<strong>name</strong></td>
</tr>
<tr>
<td></td>
<td><em>Explanation:</em> A dynamic allocation error occurred while attempting to allocate the indicated data set (name) for use as an active log data set. This usually indicates that the data set does not meet the subsystem’s data set requirements for active logs.</td>
</tr>
<tr>
<td></td>
<td><em>System Action:</em> The command request is rejected.</td>
</tr>
<tr>
<td></td>
<td><em>User Response:</em> This message is usually accompanied in the SYSLOG by a DB2 message. Locate that message to determine the exact cause of the allocation error.</td>
</tr>
<tr>
<td>BMC31590E</td>
<td><strong>BSDS READ FAILED, KEY=key, RC=code, REASON=reason</strong></td>
</tr>
<tr>
<td></td>
<td><em>Explanation:</em> OPERTUNE was unable to read the indicated record (key) from the subsystem’s BSDS because of the indicated return (code) and reason (reason) codes.</td>
</tr>
<tr>
<td></td>
<td><em>System Action:</em> The command request is rejected.</td>
</tr>
<tr>
<td></td>
<td><em>User Response:</em> Contact BMC Software Customer Support to determine the cause of the error.</td>
</tr>
</tbody>
</table>
BMC31592E  CANNOT ADD A NEW LOG, COPY number ACTIVE LOG RECORD IS FULL IN BSDS

*Explanation:* OPERTUNE was unable to add a new active log to the subsystem as it already contains the maximum number of active logs (*number*) for the log copy.

*System Action:* The command request is rejected.

*User Response:* If the new log must be added, you must delete one of the current active logs for that copy set.

BMC31593E  CANNOT REMOVE AN ACTIVE LOG, ONLY 2 COPY number ACTIVE LOGS ARE LEFT IN BSDS

*Explanation:* OPERTUNE was unable to remove the requested active log from the subsystem as it is already at the minimum number of logs allowed (*number*) for the log copy.

*System Action:* The command request is rejected.

*User Response:* If the log must be removed, you must add an additional log for that copy set.

BMC31594E  ACTIVE LOG ENTRY FOR DSN=name NOT FOUND IN BSDS

*Explanation:* The REMOVE LOG command requested a data set that is not currently in use by the subsystem.

*System Action:* The command request is rejected.

*User Response:* Correct the REMOVE LOG command to specify a log data set currently in use by the subsystem.

BMC31595E  ADDLOG FAILED, DUPLICATE LOG DATA SET NAME name

*Explanation:* The ADD LOG command requested a data set that is already in use by the subsystem.

*System Action:* The command request is rejected.

*User Response:* Correct the ADD LOG command to specify a log data set that is not in use by the DB2 subsystem.

BMC31599E  REMLOG FAILED, LOG name IS MARKED NOT REMOVABLE

*Explanation:* The REMLOG command requested a data set that cannot be removed because it is marked not reusable and the force option was not used in the REMLOG command, or the data set is the current log data set.

*System Action:* The command is rejected.

*User Response:* Wait until the log becomes removable, then reissue the command or use the force option to force the removal of a non-current log.
BMC31601E  ACTIVE LOG *name* IS REMOVED BUT IS LEFT ALLOCATED

Explanation: The indicated active log has been removed from the BSDS and will no longer be used by DB2, but it could not be deallocated from the DB2 system.

System Action: Command processing continues.

User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31602I  ADDLOG COMMAND SUCCESSFUL FOR NEW COPY *num* LOG *name*

Explanation: The requested active log (*name*) has been successfully added to the subsystem's copy number chain (*number*) for use.

System Action: Command processing continues.

User Response: None.

BMC31603I  REMLOG COMMAND SUCCESSFUL FOR COPY *num* LOG *name*

Explanation: The requested active log (*name*) has been successfully removed from use in the subsystem's copy number chain (*number*).

System Action: Command processing continues.

User Response: None.

BMC31617E  THE KEYWORD *keyword* KEYWORD IS SPECIFIED MORE THAN ONCE

Explanation: The indicated keyword (*keyword*) has been coded more than once in the command.

System Action: The command is bypassed.

User Response: Code the flagged keyword only once.

BMC31620I  field IS NOT MODIFIED, CURRENTLY SET TO value

Explanation: The QUERY command specified an element field (field) which is not currently modified by OPERTUNE. Its ZPARM value is value.

System Action: Command processing continues.

User Response: None.

BMC31623E  value IS AN INVALID VALUE FOR THE *type* KEYWORD.

Explanation: The value (value) of the indicated keyword (type) is not valid.

System Action: The command is rejected.

User Response: Check the syntax of the command, correcting the field error.
THE POSITION VALUE FOR A NEW LOG MUST BE IN THE RANGE OF 1 TO nn.

Explanation: The value specified for the POSITION keyword is out of the range 1 to nn.

System Action: The command is rejected.

User Response: Specify a position value of FIRST, NEXT, LAST, or a number in the range of 1 to nn and resubmit the command.

SUBSYSTEM IS IN SINGLE ACTIVE LOG MODE, NEW LOG POSITION OF NEXT IS CONVERTED TO LAST.

Explanation: This warning is issued if you specify NEXT for the POSITION keyword on an ADDLOG request of a copy 2 log while the DB2 subsystem is running in single active log mode. Since there is no current copy 2 log, the POSITION value of NEXT becomes meaningless.

System Action: The command is executed with the default value of the position keyword, which is LAST.

User Response: None.

string INVALID - EXPECTING ‘ALL’, ‘SYNC’ OR END OF COMMAND

Explanation: The command contained an additional parameter string where ALL, SYNC, or the end of the command was expected.

System Action: The command is rejected.

User Response: Correct the command syntax to remove the additional parameters, or change them to the ALL or SYNC keyword.

CONN conn, CORR corr, AUTH auth, PLAN plan, ASID asid

Explanation: This is an information message used to indicate all of the qualifiers for the thread about to be cancelled.

System Action: Command processing continues.

User Response: None.

ADDLOG COMMAND FAILED, NO COPY2 ACTIVE LOG RECORD IN THE BSDS, ONLY COPY1 LOGS CAN BE ADDED

Explanation: The BSDS does not contain a copy 2 active log record. No active log manipulation for copy 2 logs is allowed in this case.

System Action: The ADDLOG command is rejected. No log is added.

User Response: Specify copy 1 log data sets only to be added.
BMC31629E REMLOG COMMAND FAILED, NO COPY2 ACTIVE LOG RECORD IN THE BSDS, ONLY COPY1 LOGS CAN BE REMOVED

Explanation: The BSDS does not contain a copy 2 active log record. No active log manipulation for copy 2 logs is allowed in this case.

System Action: The REMLOG command is rejected. No log is removed.

User Response: Specify copy 1 log data sets only to be removed.

BMC31630E EXPECTING CONTROL BLOCK NAME

Explanation: The DUMP command did not specify the name of the control block to dump. The end of the command was found where the control block name was expected.

System Action: The command is rejected.

User Response: Correct the command to add the name of the control block you want to be dumped.

BMC31631E INVALID CONTROL BLOCK NAME SPECIFIED(name)

Explanation: The DUMP command specified the name of a control block that OPERTUNE does not support for dump processing.

System Action: The command is rejected.

User Response: Correct the command to replace the specified control block name with that of a supported name.

BMC31632W CONTROL BLOCK NOT FOUND

Explanation: The specified control block was not found in the specified DB2 subsystem. It is not supported at this release or not available.

System Action: The command terminates.

User Response: None.

BMC31633E ABEND code OCCURRED ATTEMPTING TO LOCATE name

Explanation: A system abend occurred while attempting to locate the requested control block (name).

System Action: The command terminates.

User Response: None.
BMC31634I  \textit{addr offset data1 data2 data3 data4 *text*}

\textit{Explanation:} This message is issued in response to a DUMP command. It contains information about the control block requested. This message will be issued one or more times for the control block requested. \textit{addr} is the beginning address of the current row of data. \textit{offset} is the relative offset from the beginning of the control block. \textit{data1} - \textit{data4} are the hexadecimal contents (4 bytes each) of the storage beginning at \textit{addr}. \textit{text} is the EBCDIC representation of that data.

\textit{System Action:} Command processing continues.

\textit{User Response:} None.

BMC31636E  \textit{verb IS NOT VALID FOR A type SUBSYSTEM}

\textit{Explanation:} The requested function (\textit{verb}) is not valid against the target subsystem type.

\textit{System Action:} The command is rejected.

\textit{User Response:} Change the command to an action that is valid for the target subsystem type.

BMC31637E  \textit{value RESULTS IN ARITHMETIC OVERFLOW - field MUST BE BETWEEN value1 AND value2}

\textit{Explanation:} The specified numeric parameter field (\textit{value}) is either too large to fit into a full word or, if the value specified is a delta value, the result of added the delta to the current value cannot fit into a full word.

\textit{System Action:} The command is rejected.

\textit{User Response:} Correct the command to specify an unsigned numeric value within the designated limits.

BMC31638E  \textit{value INVALID - field MUST BE EITHER 0 OR BETWEEN value1 AND value2}

\textit{Explanation:} The indicated value (\textit{value}) is outside the acceptable range for the indicated field (\textit{field}). The value for field must be between \textit{value1} and \textit{value2}.

\textit{System Action:} The command is rejected.

\textit{User Response:} Correct the command to specify zero or an unsigned numeric value between \textit{value1} and \textit{value2}.

BMC31639E  \textit{value RESULTS IN ARITHMETIC OVERFLOW - field MUST BE EITHER 0 OR BETWEEN value1 AND value2}

\textit{Explanation:} The specified numeric parameter field (\textit{value}) is either too large to fit into a full word or, if the value specified is a delta value, the result of added the delta to the current value cannot fit into a full word.

\textit{System Action:} The command is rejected.

\textit{User Response:} Correct the command to specify zero or an unsigned numeric value within the designated limits.
OPERTUNE messages

BMC31640E NO CHANGES CURRENTLY IN EFFECT

Explanation: A RESET ALL command was issued, but there were no outstanding SET requests.
System Action: The command is rejected.
User Response: None.

BMC31641E type name HAS NOT BEEN SET

Explanation: A RESET as issued for the indicated GROUP or SCHEDULE, but there was no outstanding SET for a GROUP or SCHEDULE (type name).
System Action: The command is rejected.
User Response: Change the RESET command to reset an element or profile type currently in effect.

BMC31643E NO type CURRENTLY SET

Explanation: A QUERY command was issued for a specific profile type (type; GROUP or SCHEDULE), but there is no outstanding request for that type.
System Action: The command is rejected.
User Response: None.

BMC31646I THREAD/CONNECTION CANCELLATION COMPLETE

Explanation: This message is issued in response to a synchronous thread/connection cancel request. The requested thread/connection is no longer active in DB2.
System Action: Command processing is complete.
User Response: None.

BMC31647I TABLE SPACE NOW STOPPED

Explanation: This message is issued in response to a synchronous FREE or STOP table space command. The requested table space is now stopped.
System Action: Command processing is complete.
User Response: None.

BMC31648E REQUEST NOT COMPLETED DUE TO OPERTUNE TERMINATION

Explanation: This message is issued in response to a synchronous command request. The request did not wait for the event to complete because of the termination of OPERTUNE.
System Action: OPERTUNE termination continues.
User Response: Use the DB2 DISPLAY THREAD or DISPLAY DATABASE commands to determine if the event has completed.
**BMC31651E  EXPECTED SUBSYSTEM COMMAND NOT FOUND**

*Explanation:* The ISSUE command verb was issued without the required parameter. The parameter is the DB2 command to be issued.

*System Action:* The command is rejected.

*User Response:* Correct the command syntax to contain the desired DB2 command as its parameter.

**BMC31652E  GROUP/SCHEDULE COMMANDS NOT ALLOWED IN A GROUP**

*Explanation:* The group profile currently being implemented contains a group or schedule modification command (SET/RESET).

*System Action:* The group or schedule modification command is not issued.

*User Response:* Remove all group or schedule modification commands from the current group.
**OPERTUNE messages**

**BMC31653E**

**RC=code RECEIVED FROM THE DATA COLLECTOR INTERFACE**

*Explanation:* This message is displayed when a nonzero return code is returned from the Data Collector (DC) interface. The Data Collector return code is located in the first two bytes of the fullword hexadecimal return code returned by the message. The Data Collector reason code is located in the last two bytes. The possible codes are:

**DC Return Codes**

- 0004 INVALID PARMLIST
- 0008 INVALID DB2 SSID
- 000C INVALID PRODUCT ID
- 0010 INVALID ENVIRONMENT
- 0014 DC INACTIVE/MISSING
- 0018 DC ERROR
- 001C DC ERROR
- 0020 DOMAMIFC ABENDED

**DC Reason Codes**

- 0004 MAXIMUM STORAGE IN DATA COLLECTOR
- 0008 MAXIMUM USERS ALREADY ACTIVE
- 000C INVALID REQUEST
- 0010 USER NOT AUTHORIZED FOR REQUEST
- 0014 USER NOT FOUND IN USH
- 0018 DUPLICATE USER
- 001C UNRECOVERABLE ABEND IN DATA COLLECTOR
- 0020 INVALID PC PARMLIST
- 0024 DATA COLLECTOR INACTIVE
- 0028 DATA COLLECTOR CYCLED
- 002C INVALID DOM/DDT/MVS/DB2 CMD
- 0030 SEGMENTATION ERROR
- 0034 REQUEST/COMMAND TIMEOUT
- 0038 EXCEPTION FACILITY INACTIVE
- 003C DB2 NOT MONITORED BY ANY DC
- 0080 ABEND IN DOMMREQ (RESETS USER)
- 00FF ATTENTION USED TO ABORT REQUEST

*System Action:* Depending on the return code, the current request between OPERTUNE and the Data Collector might fail. For some return codes, communication may not be possible.

*User Response:* Take action based on the return code, if possible. If the required action is not obvious, contact BMC Software Customer Support.
<table>
<thead>
<tr>
<th>Message Code</th>
<th>Message Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC31655E</td>
<td><strong>USER NOT AUTHORIZED FOR NORESET OPTION</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> The current user is not authorized to permanently change a ZPARM</td>
</tr>
<tr>
<td></td>
<td>value through the optional NORESET keyword.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> The keyword is rejected.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> Contact your OPERTUNE administrator to determine if the</td>
</tr>
<tr>
<td></td>
<td>appropriate authority can be granted to you.</td>
</tr>
<tr>
<td>BMC31656I</td>
<td><strong>COPY x LOG DATA SETS:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> The active log data sets for the copy indicated by x (1 or 2) are</td>
</tr>
<tr>
<td></td>
<td>in the subsequent messages.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> Command processing continues.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> None.</td>
</tr>
<tr>
<td>BMC31657I</td>
<td><strong>DSN=dsn, STATUS=fields, REMOVEABLE=curr</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> This message follows message 31656I and is presented for each</td>
</tr>
<tr>
<td></td>
<td>active log in the subsystem. dsn represents the active logs data set name, fields</td>
</tr>
<tr>
<td></td>
<td>represents the status of the active log, and curr indicates whether the log is</td>
</tr>
<tr>
<td></td>
<td>currently removable.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> Command processing continues.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> None.</td>
</tr>
<tr>
<td>BMC31658E</td>
<td><strong>RESET COMMAND NOT ALLOWED FOR name ELEMENT</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> The RESET command is not supported for the requested element</td>
</tr>
<tr>
<td></td>
<td>(name).</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> The command is rejected.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> None.</td>
</tr>
<tr>
<td>BMC31659E</td>
<td><strong>field SIZE REQUESTED(new) IS LESS THAN THE CURRENT SIZE(old)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Explanation:</strong> The current command specifies a new field size (new) that is</td>
</tr>
<tr>
<td></td>
<td>smaller than its current size (old). OPERTUNE is only capable of increasing the EDM</td>
</tr>
<tr>
<td></td>
<td>pool size.</td>
</tr>
<tr>
<td></td>
<td><strong>System Action:</strong> The command is rejected.</td>
</tr>
<tr>
<td></td>
<td><strong>User Response:</strong> If you want to reduce your field size, you must alter your</td>
</tr>
<tr>
<td></td>
<td>ZPARMs module and cycle your DB2 subsystem.</td>
</tr>
</tbody>
</table>
BMC3162I  exit SUCCESSFULLY RELOADED

Explanation: This message is issued in response to a RELOAD command. The requested user exit (exit) was successfully reloaded in the DB2 subsystem.
System Action: None.
User Response: None.

BMC31664E  UNABLE TO LOCATE ORIGINAL CDE FOR exit

Explanation: While attempting to reload a DB2 user exit (exit), the MVS CDE control block for the previous exit could not be found.
System Action: The user exit is not reloaded.
User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31665E  UNABLE TO LOAD NEW VERSION OF exit

Explanation: While attempting to reload a DB2 user exit (exit), the MVS LOAD SVC failed for user exit.
System Action: The user exit is not reloaded.
User Response: Check for other error messages in the SYSLOG to determine if additional information as to the cause of the error may be found. If not, contact BMC Software Customer Support to determine the cause of the error.

BMC31666E  UNABLE TO LOCATE NEW CDE FOR exit

Explanation: While attempting to reload a DB2 user exit (exit), the MVS CDE control block for the newly loaded exit could not be located.
System Action: The user exit is not reloaded.
User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31667I  DDF PARAMETERS SUCCESSFULLY CHANGED

Explanation: This message is issued in response to the DDF operational assist command. OPERTUNE has successfully updated the DDF BSDS record as requested.
System Action: None.
User Response: None.
BMC31672E  value INVALID - field MUST NOT END WITH PERIOD

Explanation: The indicated LUWID qualifier (field) began or ended with a period.

System Action: The command is rejected.

User Response: Correct the LUWID qualifier field in the CANCEL command to contain the required uniqueness value.

BMC31673E  value INVALID - LUWID UNIQUENESS VALUE MUST BE 12 CHARACTERS LONG

Explanation: The uniqueness value specified in the LUWID qualifier field is not the required 12 character.

System Action: The command is rejected.

User Response: Correct the LUWID qualifier field in the CANCEL command to contain a valid uniqueness value.

BMC31676I  CONN conn, CORR corr, AUTH auth, PLAN plan, ASID asid, LUWID lwid, SSID ssid, STATUS status, REQUESTS requests

Explanation: This message is issued in response to an OPERTUNE DISPLAY THREAD command. This is an informational message used to indicate the status of the thread indicated by the qualifiers. The status field is the same as the one returned by the DB2 DISPLAY THREAD commands.

System Action: Command processing continues.

User Response: None.

BMC31677I  THERE ARE NO ACTIVE THREADS/CONNECTIONS

Explanation: This message is issued in response to an OPERTUNE DISPLAY THREAD command. It indicates that there are not any threads and/or connections active in the target subsystem.

System Action: Command processing continues.

User Response: None.

BMC31682E  REQUIRED ARCHIVE FIELD NOT SPECIFIED

Explanation: The UPDATE command did not contain the required ARCHIVE update field specified. This field is required for OPERTUNE to know which archive log entry to update.

System Action: The command request is rejected.

User Response: Correct the update request to specify the ARCHIVE update field specifier.
**BMC31683E**  NO UPDATE FIELDS SPECIFIED

*Explanation:* The UPDATE command did not contain any of the optional update fields. At least one of the optional fields must be specified in order for OPERTUNE to know which fields to change in the archive log entry.

*System Action:* The command request is rejected.

*User Response:* Correct the update request to specify one or more of the optional update field specifiers (UNIT, VOLUME, and CATALOG).

**BMC31684E**  UPDATE FAILED IN BSDS COPY num, KEY=key, RC=code, REASON=reason

*Explanation:* OPERTUNE was unable to update the BSDS record in the indicate BSDS copy (num) because of the indicated return and reason codes.

*System Action:* The command request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31685E**  FAILED TO RESET BSDS - UPDATE RECORDED IN BSDS COPY 1 BUT NOT COPY 2, KEY=key, RC=code, REASON=reason

*Explanation:* This message is issued after a previous error was encountered for an update archive log request. OPERTUNE was unable to remove the partial changes from both BSDSs for the reasons indicated by the return and reason codes.

*System Action:* The command request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31686E**  dsn WAS NOT FOUND IN THE BSDS

*Explanation:* The indicated data set name (dsn) is not contained in the BSDS.

*System Action:* The command request is rejected.

*User Response:* Correct the command to specify a valid archive log data set name. If necessary, use the DISPLAY ARCHIVE command to determine the names of the valid archive log data sets.

**BMC31687I**  UPDATE COMPLETE FOR dsn

*Explanation:* The UPDATE command has successfully completed the request to update an archive log data set in the BSDS.

*System Action:* Command processing is complete.

*User Response:* None.
**BMC31689I**  THERE ARE NO ARCHIVE LOG ENTRIES IN THE BSDS

*Explanation:* This message is issued in response to the DISPLAY ARCHIVE command. No archive log entries exist the BSDS.

*System Action:* None.

*User Response:* None.

**BMC31690I**  DSNNAME name, UNIT unit, VOLUME volser, CATALOG status

*Explanation:* This message is issued in response to the DISPLAY ARCHIVE command. It indicates the current BSDS status of an individual archive log entry.

*System Action:* None.

*User Response:* None.

**BMC31695E**  ADDLOG FAILED, RBA RANGE OVERLAP OF ARCHIVE MODEL WITH EXISTING ACTIVE LOG name

*Explanation:* The archive log specified in the LIKE keyword of the ADDLOG command must not span an RBA range that overlaps with any of the RBA ranges of currently existing active logs under the subsystem's control.

*System Action:* The ADDLOG command fails.

*User Response:* Check that the RBA range of the archive log specified in the LIKE keyword of the ADDLOG command does not overlap with the RBA range of any existing active log.

**BMC31696I**  ARCHIVE LOG MODEL: name, BEGIN RBA: begin, END RBA: end

*Explanation:* This is an informational message always displayed following message 31695E. It displays the name and RBA range of the archive log model involved in the RBA range overlap.

*System Action:* None.

*User Response:* None.

**BMC31697I**  ACTIVE LOG NAME: name, BEGIN RBA: begin, END RBA: end

*Explanation:* This is an informational message always displayed following messages 31695E and 31696I. It displays the name and RBA range of the active log involved in the RBA range overlap.

*System Action:* None.

*User Response:* None.
**BMC31702E**  
*string1* MUST BE LESS THAN OR EQUAL TO *string2*

*Explanation:* The parameter for which a value was specified (*string1*) cannot be greater than the value indicated by *string2*.

*System Action:* The request is rejected.

*User Response:* Change the command to specify a valid value for *string1*.

**BMC31703I**  
*string* WILL NOT TAKE EFFECT - DB2 IS UNABLE TO CREATE THE HIPERPOOL

*Explanation:* The parameter for which a value was specified (*string*) cannot become active since DB2 failed in its attempt to create a hiperpool.

*System Action:* Command processing continues.

*User Response:* Check for DB2-initiated messages that can indicate the reason the hiperpool was not created.

**BMC31707E**  
THIS CANCEL REQUEST IS FOR A QUEUED DISTRIBUTED THREAD WHICH CANNOT BE CANCELLED

*Explanation:* OPERTUNE will not cancel distributed threads that are inactive because the maximum remote active threshold has been exceeded.

*System Action:* The cancel request is rejected.

*User Response:* Cancel the thread after it has become active.

**BMC31708E**  
task REQUESTED AN UNKNOWN FUNCTION

*Explanation:* The indicated task (task) requested an unknown function of the SRB scheduling routine.

*System Action:* The request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the problem.

**BMC31709E**  
value CANNOT BE SPECIFIED WITH field

*Explanation:* The specified value (*value*) is mutually exclusive with the specification of the indicated field (*field*).

*System Action:* The command is rejected.

*User Response:* Specify the parameter exclusively for the request.

**BMC31710I**  
PARTITION NOW STOPPED

*Explanation:* OPERTUNE issues this message in response to a FREE or STOP TABLESPACE partition command.

*System Action:* None.

*User Response:* None.
BMC31711E  value INVALID - EXPECTING ‘STOP’, ‘SYNC’ OR END OF COMMAND

Explanation: The command contained an additional value (value) where STOP, SYNC, or the end of the command was expected.

System Action: The command is rejected.

User Response: Correct the command syntax to remove the additional parameter or change it to STOP or SYNC.

BMC31713E  TABLESPACE name NOT FOUND IN subsystem

Explanation: The specified table space is not found in this DB2.

System Action: None.

User Response: Specify a valid table space name.

BMC31714I  CANCEL COMPLETE: CONN conn, CORR corr, AUTH auth, PLAN plan, ASID asid, LUWID luwid

Explanation: The requested cancel of the thread is complete.

System Action: None.

User Response: None.

BMC31716I  THIS IS A DEFERRED RESET REQUEST

Explanation: This message is issued in response to a QUERY command. It indicates that a RESET for the element was issued while the subsystem was down. OPERTUNE is waiting for the subsystem to come back up so that it can complete the RESET. Once the reset has occurred, this entry will be discarded.

System Action: None.

User Response: None.

BMC31720E  command COMMAND SYNTAX INVALID - parameter IS REQUIRED

Explanation: A required parameter (parameter) is missing in the indicated command (command).

System Action: The command is rejected.

User Response: Reissue the command, including the required parameter.

BMC31725E  DDF MUST BE STOPPED BEFORE THE DDF COMMAND CAN BE PROCESSED

Explanation: The DDF command was issued while DDF was started.

System Action: The request is rejected.

User Response: Stop DDF and resubmit the request.
BMC31726I  THE typeName IS NOT OR IS NO LONGER GBP DEPENDENT

Explanation: The buffer pool or table space is no longer group buffer pool dependent. Castout has no effect.
System Action: None.
User Response: None.

BMC31728I  CASTOUT WAS NOT PERFORMED FOR typeName BECAUSE subsystem IS NOT THE CASTOUT OWNER

Explanation: A castout operation can only be performed by the castout owner.
System Action: None.
User Response: Issue the castout command to the subsystem that is the castout owner.

BMC31730E  THE name ELEMENT IS ONLY VALID FOR DB2 DATA SHARING

Explanation: The indicated element (name) can only be changed in a DB2 data sharing environment.
System Action: The request is rejected.
User Response: None.

BMC31731E  REQUEST FAILED DUE TO CATALOG ERROR RC = returnCode

Explanation: The request failed due to a non-zero return code from catalog management routines.
System Action: The request fails.
User Response: Ensure that the data component name is valid. If it is, and you still get this message, contact BMC Software Customer Support.

BMC31733E  THE START ASYNCHRONOUS WRITE THRESHOLD MUST BE GREATER THAN THE STOP ASYNCHRONOUS WRITE THRESHOLD

Explanation: The SET BUFPOOL command specified would set the stop asynchronous write threshold below the start asynchronous write threshold.
System Action: The command is rejected.
User Response: Change the start and stop thresholds to valid values and resubmit the command.
BMC31734E  THE START ASYNCHRONOUS WRITE THRESHOLD MUST BE LESS THAN THE START SYNCHRONOUS WRITE THRESHOLD

*Explanation:* The SET BUFPOOL command specified would set the start asynchronous write threshold above the start synchronous write threshold.

*System Action:* The command is rejected.

*User Response:* Change the thresholds to valid values and resubmit the command.

BMC31735E  THE STOP ASYNCHRONOUS WRITE THRESHOLD MUST BE LESS THAN THE START SYNCHRONOUS WRITE THRESHOLD

*Explanation:* The SET BUFPOOL command specified would set the start synchronous write threshold below the stop asynchronous write threshold.

*System Action:* The command is rejected.

*User Response:* Change the thresholds to valid values and resubmit the command.

BMC31736E  A THREAD ALLIED IN THE CANCEL REQUESTOR ADDRESS SPACE CANNOT BE CANCELLED -- REQUEST REJECTED

*Explanation:* The allied TCB is located in the same address space as the one which initiated the cancel request. This is not allowed.

*System Action:* The request is rejected.

*User Response:* Direct a cancel request to OPERTUNE from an address space other than that of the thread to be canceled.

BMC31737E  THE LOADED DSNHDECP HAS A LENGTH OR ID THAT IS INVALID

*Explanation:* The ID or length of the new loaded copy of DSNHDECP does not match the existing copy.

*System Action:* The request fails.

*User Response:* Ensure that a valid DSNHDECP module for this release of DB2 has been generated.

BMC31738E  UNABLE TO ALLOCATION *dsn*

*Explanation:* The allocation request for the indicated data set (*dsn*) failed

*System Action:* The request is aborted.

*User Response:* Determine why the allocation failed by examining the documented error codes for SVC 99, or contact BMC Software Customer Support.
BMC31739E  **dsname IS ALREADY ALLOCATED FOR DDNAME ddname -- REQUEST REJECTED**

*Explanation:* The ddname for the PSID to be added already has a data set allocated to it.

*System Action:* The request is aborted.

*User Response:* Ensure that the correct data set name was entered.

BMC31740E  **DIV ERROR FOR DSNAME dsname ERROR CODE = code REASON = code**

*Explanation:* A DIV operation on the specified data set failed.

*System Action:* The request is aborted.

*User Response:* Determine the cause of the error based on the returned DIV (Data in Virtual) error codes, or contact BMC Software Customer Support.

BMC31742E  **THE DATASET RRBA rba IS INVALID FOR THE PSID psid BEING ADDED -- REQUEST ABORTED**

*Explanation:* The data set for the PSID being added has a recovery RBA that is one of the following values:

- nonzero for a new PSID
- zero for a PSID that is defined and has been online

*System Action:* The request is rejected.

*User Response:* Ensure that the correct data set name is specified. If the name is correct, contact BMC Software Customer Support for assistance.

BMC31743E  **THE DATASET RRBA rba DOES NOT MATCH THE PSID psid RBA rba -- REQUEST REJECTED**

*Explanation:* The data set for the PSID being added has a recovery RBA that does not match the one from the log. The PSID has been online before and the data set may be down leveled or not previously associated with this PSID.

*System Action:* The request is rejected.

*User Response:* Ensure that the correct data set name is specified.

BMC31744E  **THE PSID psid REQUESTED TO BE ADDED IS ALREADY DEFINED AND ONLINE -- REQUEST REJECTED**

*Explanation:* The PSID being added is already defined and online.

*System Action:* The request is rejected.

*User Response:* Ensure that the correct PSID is specified.
**BMC31745E**  
**item INVALID - field MUST BE A MULTIPLE OF value**

*Explanation:* The value specified is not a multiple of the specified multiplier:

— **item**—description of the element being changed  
— **field**—element parameter  
— **value**—numeric multiple

*System Action:* The request is rejected.  
*User Response:* Enter a value of the proper multiple.

**BMC31746I**  
**item COULD ONLY BE CHANGED TO value**

*Explanation:* The requested change to an element could not be completed. Only a partial change was completed.:

— **item**—description of the element being changed  
— **value**—final result after the change

*System Action:* The change is partially executed.  
*User Response:* None.

**BMC31747E**  
**THE PSID(num) REQUEST TO BE REMOVED IS NOT state - REQUEST REJECTED**

*Explanation:* The REMPSET command specified a page set (num) that is not in the required state (state) to be removed. The page set must be defined and online in order to be removed.

*System Action:* The command is rejected.  
*User Response:* Change the command to refer to the proper page set, then reissue the command.

**BMC31748E**  
**THE PSID (xx) REQUESTED TO BE REMOVED IS ASSOCIATED WITH A QUEUE THAT IS CURRENTLY OPEN BY AN ACTIVE THREAD -- TRY AGAIN LATER OR USE FORCE**

*Explanation:* A queue mapped to the PSID being removed is open by an active thread.

*System Action:* The request fails.  
*User Response:* Wait until the thread that has opened the queue terminates, cancel the thread, or, as a last resort, use REMOVE FORCE.

**BMC31750E**  
**port AND resport MUST BE DIFFERENT - REQUEST REJECTED**

*Explanation:* The DDF command contained the same value for the PORT (port) and RESPORT (resport) keywords. These values must be different.

*System Action:* The command is rejected.  
*User Response:* Change the command to have different values for the PORT and RESPORT fields, and reissue the command.
**BMC31751E**  
**value IS INVALID DUE TO THE LENGTH OF ONE OR MORE OF THE field**

*Explanation:* The current length of one or both of the archive data set prefix names prevents OPERTUNE from changing the archive timestamp value as requested. It would result in the length of the archive data set names exceeding 44 characters.

*System Action:* The command is rejected.

*User Response:* If the specified archive timestamp value is needed, change the archive data set prefix names to a shorter value with the SET ARCPREF command. Then reissue the SET ARCTSTMP command.

**BMC31752W**  
**resource HAS NO USERS**

*Explanation:* The FREE command determined that the specified resource (resource) does not have any threads currently accessing it.

*System Action:* Command processing continue.

*User Response:* None.

**BMC31755I**  
**CONN conn, XREF xref, USER uid, ASID asid**

*Explanation:* This is an information message used to indicate all of the qualifiers for the thread about to be cancelled.

*System Action:* Command processing continues.

*User Response:* None.

**BMC31760W**  
**UNABLE TO RESET DEFERRED REQUEST FOR element**

*Explanation:* The request to relinquish control of the subsystem caused OPERTUNE to discard the deferred reset request for the indicated element (element). This means that the element will not be reset to its original value when the subsystem comes back up.

*System Action:* Command processing continues.

*User Response:* None.

**BMC31761I**  
**dsn SUCCESSFULLY ADDED AS PSID num IN BUFFER POOL id**

*Explanation:* The ADDPSET command has successfully added the page set to the subsystem.

*System Action:* None.

*User Response:* None.
BMC31762I  **PSID num SUCCESSFULLY REMOVED**

*Explanation:* The REMPSET command has successfully removed the page set from the subsystem.

*System Action:* None.

*User Response:* None.

BMC31763I  **THE CASTOUT OWNER FOR dsn HAS BEEN CHANGED TO ssid**

*Explanation:* The CHANGECO command has successfully changed the castout owner for the indicated data set (dsn) to the requested subsystem (ssid).

*System Action:* None.

*User Response:* None.

BMC31764E  **ssid IS NOT UP, IT CAN NOT BECOME THE field**

*Explanation:* The CHANGECO command requested a subsystem (ssid) that was down become the new castout owner. The subsystem must be active in order to be in charge of castouts.

*System Action:* The command is rejected.

*User Response:* Change the subsystem ID to the name of a different data sharing member, and reissue the command.

BMC31765E  **ssid IS NOT A MEMBER OF DATA SHARING GROUP dsgroup**

*Explanation:* The CHANGECO command requested a subsystem (ssid) that either is not a member of the same data sharing group (dsgroup) as the current owner or is not under the control of an OPERTUNE system.

*System Action:* The command is rejected.

*User Response:* Change the command to specify a subsystem in the data sharing group, and reissue the command.

BMC31766I  **THE CASTOUT FOR type dsn HAS BEEN SUCCESSFULLY COMPLETED**

*Explanation:* The CASTOUT command has successfully castout the data set’s pages.

*System Action:* None.

*User Response:* None.

BMC31767I  **THE SUBSYSTEM CHECKPOINT HAS BEEN SUCCESSFULLY COMPLETED**

*Explanation:* The CHECKPT command has successfully initiated a subsystem checkpoint.

*System Action:* None.

*User Response:* None.
**BMC31768E**  
*value INVALID - EXPECTING NUMERIC OR DELTA VALUE*

Explanation: The value specified (*value*) was not valid. It should be either numeric or be a delta value.

System Action: The command is rejected.

User Response: Change the field to be a valid numeric or delta value, and reissue the command.

**BMC31769I**  
*CANCEL COMPLETE: CONN conn, XREF xref, AUTH auth, ASID asid, LUWID luwid*

Explanation: The requested cancel of a thread is complete.

System Action: None.

User Response: None.

**BMC31770E**  
*ERROR OCCURRED CHANGING THE THREAD STATUS*

Explanation: While attempting to cancel the requested thread, an error occurred while trying to change its status.

System Action: The cancel is aborted.

User Response: Try the command again. If the problem reoccurs, contact BMC Software Customer Support to determine the cause of the problem.

**BMC31771E**  
*UNABLE TO STOP THE TABLE SPACE, COMMAND ABORTED*

Explanation: The attempt to stop a table space was not successful.

System Action: The command is rejected.

User Response: Previous messages from the command contain the output from the STOP command. Examine them to determine the cause of the problem, and reissue the command.

**BMC31772E**  
*NO CURRENT LOG WAS FOUND FOR THE COPY num LOGS*

Explanation: The ADDLOG command specified MODEL(CURRENT), but there is no current active log for the indicated active log set (num).

System Action: The command is rejected.

User Response: Remove the log specification for the indicated copy number or remove the MODEL(CURRENT) parameter from the command, and reissue the command.
BMC31773E  RC=code OCCURRED OBTAINING THE ALLOCATION INFO FOR DSN=dsn

Explanation: The ADDLOG command specified the MODEL keyword, but OPERTUNE was unable to extract the catalog information regarding the model data set (dsn).

System Action: The command is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the problem.

BMC31774E  UNABLE TO LOAD THE IDCAMS MODULE TO ALLOCATE THE LOG DATA SET

Explanation: The ADDLOG command specified the MODEL keyword, but OPERTUNE was unable to load the IDCAMS program to allocate the data set.

System Action: The command is rejected.

User Response: Ensure that the IDCAMS module is in the OPERTUNE STEPLIB, JOBLIB, or LINKLIST library, and reissue the command.

BMC31775E  THE PARTITION CANNOT BE SPECIFIED ALONG WITH TABLE SPACE WILDCARDS

Explanation: The FREE command specified a partition along with a wildcard specifier (* or ?) in one of the table space name fields. The partition specification is not allowed when wildcards are used.

System Action: The command is rejected.

User Response: Change the command to remove either the wildcards or the partition, and reissue the command.

BMC31776W  THERE ARE NO INUSE TABLE SPACES WHICH MATCH THE WILDCARDS

Explanation: The FREE command specified wildcards for one or more of the table space name fields. There are no table spaces in use which match the wildcards.

System Action: Command processing continues.

User Response: None.

BMC31777I  DYNAMIC SQL CACHE SUCCESSFULLY ININVALIDATED

Explanation: The INVDCSQL command has successfully invalidated the cache for the requested object.

System Action: None.

User Response: None.
**BMC31778E**  
*value INVALID - field MUST BE EITHER ‘opt1’, ‘opt2’ OR ‘opt3’*

**Explanation:** The indicated field (field) contained an invalid value (value). The valid values are limited to the values listed in the message.

**System Action:** The command is rejected.

**User Response:** Change the command to contain one of the valid values, and reissue the command.

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**BMC31779E**  
*THE VDWQT VALUE(vdwqt) CANNOT BE GREATER THAN THE DWQT VALUE(dwqt)*

**Explanation:** The vertical deferred write threshold value (vdwqt) specified was greater than the deferred write threshold value (dwqt) specified. This is not allowed.

**System Action:** The command is rejected.

**User Response:** Change the command so that the vertical deferred write threshold is less than or equal to the deferred write threshold, and reissue the command.

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**BMC31780E**  
*value INVALID, field CANNOT CONTAIN EMBEDDED BLANKS*

**Explanation:** One or more blanks was found in the indicated field (field). This field may not contain blanks.

**System Action:** The command is rejected.

**User Response:** Change the field to a valid value, and reissue the command.

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**BMC31781E**  
*value INVALID, field CANNOT CONTAIN EMBEDDED COMMAS*

**Explanation:** One or more commas was found in the indicated field (field). This field may not contain commas.

**System Action:** The command is rejected.

**User Response:** Change the field to a valid value, and reissue the command.

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**BMC31782I**  
*type SUBSYSTEM name RELEASE version*

**Explanation:** This message is issued each time OPERTUNE detects a subsystem coming up. It indicates the name and release of the subsystem.

**System Action:** None.

**User Response:** None.
BMC31783I  \textit{elementParameter} = \textit{value}

\textbf{Explanation:} Each time OPERTUNE detects a subsystem coming up, this message is issued for each element parameter in the subsystem. It provides a log of what values the subsystem contained when it first started.

\textit{System Action:} None.

\textit{User Response:} None.

BMC31784E \textbf{TABLE SPACE IS NO LONGER STOP PENDING}

\textbf{Explanation:} During the execution of a synchronous FREE or STOP command, OPERTUNE detected that the table space changed from a stop pending status to some status other than stopped.

\textit{System Action:} The wait for the synchronous completion of the command is aborted.

\textit{User Response:} Display the table space status to see its current state. Scan for previous commands which would have caused the table space to get into this state.

BMC31785E \textbf{parm1 CANNOT BE SET UNLESS parm2 IS SET TO parm3 -- REQUEST REJECTED}

\textbf{Explanation:} The processing of the request is not allowed because of a ZPARM conflict.

\textit{System Action:} Request is rejected.

\textit{User Response:} Alter the conflicting ZPARM with OPERTUNE and retry the request.

BMC31788E \textbf{NO EDMPOOL DATASPACE EXISTS -- REQUEST REJECTED}

\textbf{Explanation:} The EDM pool data space has not been created. This can be due to a zero value for EDMDSPAC in the startup ZPARMs or a CACHEDYN value of NO.

\textit{System Action:} Request is rejected.

\textit{User Response:} Check startup ZPARMs to see why EDM pool data space was not created.

BMC31790I \textbf{PEER LOG dsname WAS NOT FOUND}

\textbf{Explanation:} The Peer Log to be removed was not allocated by this DB2 data sharing member.

\textit{System Action:} None.

\textit{User Response:} None.
BMC31792E  SHAREOPTIONS FOR LOG DATASET xxx ARE INCORRECT FOR DATASHARING

Explanation: Share options for log data set are incorrect for data sharing. The option must be log data set 2,3.
System Action: Request is rejected.
User Response: Recreate data set with correct share options.

BMC31793E  ssss DATASHARING MEMBER xxx IS NOT A TARGET SUBSYSTEM OF THIS OPERTUNE

Explanation: The specified DB2 data sharing member is not under OPERTUNE control, and therefore will not be affected by this command. BMC Software recommends that the same OPERTUNE group control all members of a DB2 data sharing group.
System Action: None.
User Response: None.

BMC31794E  THREAD’S TOKEN IS ZERO AND CANNOT BE CANCELLED AT THIS TIME

Explanation: The thread’s token field contains a zero value and therefore cannot be cancelled.
System Action: The request is rejected.
User Response: Determine the correct thread to cancel. Perform the cancel operation again.

BMC31797E  SYNCRONOUS command FOR TABLESPACE name HAS NOT COMPLETED IN hhhh HOURS AND mm..... MINUTES

Explanation: The indicated command (FREE or STOP) was issued against the indicated table space, but it has not completed in the time indicated by hhhh (hours) and mm (minutes).
System Action: None.
User Response: Cancel the user of the table space. Use the syslog to determine the user.

BMC31800E  THE COMMAND FIELD CONTAINS AN INVALID COMMAND FOR THIS PANEL

Explanation: The command issued from the command field is not acceptable for this panel. Acceptable non-standard commands (if any) are listed in the upper right portion of each panel.
System Action: The command is rejected.
User Response: Correct the command to be a valid command for this panel.
BMC31801W  THE WAIT FOR THE PREVIOUS REQUEST WAS ABORTED BY ATTN KEY

Explanation: A request had been sent to the host OPERTUNE, but the ATTN key was pressed before the response was received. This causes the dialog to stop waiting for the response.

System Action: The dialog stops waiting for the response. However, the request will still be processed by the target OPERTUNE, but you are not notified of the response.

User Response: None.

BMC31802E  THE ACTIVE LOG SPECIFIED IS NOT RECORDED IN THE BSDS

Explanation: The active log data set name was not found in the BSDS of the targeted primary subsystem. This field must contain a valid active log data set name.

System Action: None.

User Response: Ensure that the correct subsystem is the current primary target subsystem. If it is correct, change the data set name to one of those recorded in the subsystem’s BSDS.

BMC31806I  ONE OF THE ELIGIBLE OPERTUNES MUST BE CHOSEN AS THE HOST

Explanation: This message is issued whenever a request is to be sent to a target OPERTUNE and a previous host has not been selected or is no longer available, and when there are two or more eligible host OPERTUNEs.

System Action: The dialogs will send the request only after a host OPERTUNE has been selected.

User Response: Select a host OPERTUNE from the list of eligible OPERTUNEs.

BMC31807W  THERE ARE NO OPERTUNES ACTIVE IN THIS SYSTEM

Explanation: This message is issued whenever a request is to be sent to a target OPERTUNE and the dialogs cannot find an eligible host OPERTUNE.

System Action: The request is rejected.

User Response: Have an eligible host OPERTUNE started on the current MVS system.

BMC31808E  A OPERTUNE LOGIC ERROR OCCURRED PASSING THE REQUEST ON

Explanation: This message indicates an OPERTUNE internal error. An error occurred while attempting to add a work request to the host OPERTUNE’s work queue.

System Action: The response to the current request is not available.

User Response: Contact BMC Software Customer Support to determine the cause of the error.
**BMC31809E**  THE REQUESTED TARGET IS INVALID

*Explanation:* This message indicates that the current subsystem command request requires a response from a target OPERTUNE, but the current target OPERTUNE is invalid.

*System Action:* The request is rejected.

*User Response:* Change the current target OPERTUNE to the target that you want to receive the request. Then reissue the request.

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**BMC31810E**  THE REQUESTED OPERTUNE SYSTEM IS NOT ACTIVE OR IS INVALID

*Explanation:* The current request was made to a target OPERTUNE that is not active at this time.

*System Action:* The request is rejected.

*User Response:* Have the desired target OPERTUNE brought up, or switch to a new target OPERTUNE. Then reissue the request.

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**BMC31811E**  THE REQUESTED FUNCTION IS NOT CURRENTLY AVAILABLE

*Explanation:* The OPERTUNE function handler for the current request is not currently available at the target OPERTUNE. This occurs if the target OPERTUNE is in the process of shutting down.

*System Action:* The request is rejected.

*User Response:* Have the desired target OPERTUNE brought back up, or switch to a new target OPERTUNE, then reissue the request.

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**BMC31812W**  THE USER IS NOT AUTHORIZED FOR THE REQUEST AT THE TARGET SYSTEM

*Explanation:* Your profile at the target OPERTUNE indicates that you are not authorized to perform the indicated request.

*System Action:* The request is rejected.

*User Response:* Contact the OPERTUNE administrator for the target OPERTUNE to determine if the authorization can be changed.

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**BMC31813W**  ONE OR MORE OF THE REQUIRED TARGET SYSTEM(S) IS NOT ACTIVE

*Explanation:* The request for subsystem information could not be obtained as the target subsystem is not currently active.

*System Action:* The request is rejected.

*User Response:* Have the desired target subsystem brought back up, or switch to a new target subsystem. Then, reissue the request.
**BMC31815W**  
*type PROFILE profile IS IN USE BY ANOTHER USER*

*Explanation:* The update/delete request for the indicated profile was denied because another user is currently updating it.

*System Action:* The request is rejected.

*User Response:* Wait for the user to complete their update of the profile, and then re-select it.

**BMC31816W**  
*type PROFILE profile NO LONGER EXISTS*

*Explanation:* The update/delete request for the indicated profile was denied because it no longer exists at the target OPERTUNE.

*System Action:* The request is rejected.

*User Response:* None.

**BMC31818W**  
*THE CURRENT USER DOES NOT HAVE CUSTOMIZATION AUTHORITY AT target*

*Explanation:* Your profile at the target OPERTUNE indicates that you do not have the customization authority required for the current request.

*System Action:* The request is rejected.

*User Response:* Contact the OPERTUNE administrator for the target OPERTUNE to determine if the authorization can be changed.

**BMC31819E**  
*THE OPEN FAILED FOR THE PROFILE DATA SET*

*Explanation:* The profile request was denied because the target OPERTUNE was unable to open the KSDS profile data set.

*System Action:* The request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.

**BMC31820E**  
*THE CLOSE FAILED FOR THE PROFILE DATA SET*

*Explanation:* The profile request was denied because the target OPERTUNE was unable to close the KSDS profile data set.

*System Action:* The request is rejected.

*User Response:* Contact BMC Software Customer Support to determine the cause of the error.
BMC31821W  THE TARGET DID NOT HAVE type profile ALLOCATED

Explanation: The profile request was denied because the target OPERTUNE did not have the required enqueue in place for the indicated record. profile is the name of the profile, and type is the profile type (GROUP, USER, SYSTEM, and so on).

System Action: The request is rejected.

User Response: After the profile was selected for update, the target OPERTUNE was cycled, or another user released the enqueue through the profile enqueue maintenance dialog. Re-select and re-update the profile.

BMC31822W  type profile ALREADY EXISTS AT target

Explanation: The profile add request was denied because the target OPERTUNE already had a profile with the same name. This is an OPERTUNE internal error.

System Action: The request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31823E  AN ERROR OF UNKNOWN ORIGIN OCCURRED PROCESSING THE REQUEST

Explanation: The profile request was denied because the target OPERTUNE encountered an unanticipated error. This is an OPERTUNE internal error.

System Action: The request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31824E  THE PROFILE REQUEST WAS FOR AN UNKNOWN TYPE

Explanation: The profile request was denied because the target OPERTUNE did not recognize the profile type (group, system). This is an OPERTUNE internal error.

System Action: The request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the error.

BMC31825E  THE REQUEST FOR type profile WAS NOT VALID

Explanation: The profile request was denied because the target OPERTUNE did not recognize the request type (view, update). This is an OPERTUNE internal error.

System Action: The request is rejected.

User Response: Contact BMC Software Customer Support to determine the cause of the error.
BMC31826E  USER PROFILE FOR userid DOES NOT EXIST

Explanation: You were denied access to the OPERTUNE dialogs because a user profile for you did not exist and the KSDS did not contain a default user profile.

System Action: You are denied access to the OPERTUNE dialogs.

User Response: Contact the OPERTUNE administrator to determine if a user profile can be built for you.

BMC31827W  A USER PROFILE FOR userid DOES NOT EXIST - THE DEFAULT WILL BE USED

Explanation: The KSDS did not have a user profile for the current user but was allowed access to the dialogs because a default user profile is defined.

System Action: You are allowed access to the OPERTUNE dialogs with the authorizations contained in the default user profile.

User Response: If the default user profile authorizations are not sufficient for you, contact your OPERTUNE administrator to determine if they can be changed.

BMC31828W  THE USER DID NOT SELECT ONE OF THE OPERTUNES PRESENTED

Explanation: After being presented with the host selection panel, you exited the panel without selecting a host OPERTUNE.

System Action: Requests requiring a host OPERTUNE will be rejected.

User Response: None.

BMC31829E  ONLY ONE ROW MAY BE SELECTED FROM THE CURRENT TABLE

Explanation: You selected more than one row from a single selection list (target OPERTUNE selection).

System Action: All selections are ignored.

User Response: Select only one entry from the list.

BMC31830E  THE LINE SELECTION CHARACTER IS INVALID FOR THIS PANEL

Explanation: The row on which the cursor is positioned was not selected with one of the valid selection characters for this panel.

System Action: The invalid selection character and all subsequent selection characters are ignored.

User Response: Select the row with one of the panel’s valid selection characters listed above the table.
BMC31831E  ONE OF THE SELECTED TARGET types IS INVALID

Explanation: The target OPERTUNE is not set to a valid system or the target subsystem (type) is not set to a valid subsystem.

System Action: Any panel requests are ignored until both the target OPERTUNE and subsystem are set to valid systems.

User Response: Correct the target in error to specify a valid system. Also check to see if the host OPERTUNE is correctly set.

BMC31832E  THE CURRENT USER IS NOT AUTHORIZED FOR THE REQUEST

Explanation: You requested an OPERTUNE function for which you are not authorized.

System Action: The request is rejected.

User Response: Contact the OPERTUNE administrator to obtain the desired authorization. Also check that the profile data set allocated in the dialogs is the same as the profile data set allocated in the started task.

BMC31833E  THE REQUESTED STRING WAS NOT FOUND IN THE RESPONSE PANEL

Explanation: The string requested in the FIND command was not found in the remainder of the response messages.

System Action: None.

User Response: None.

BMC31836W  THE REQUESTED COMMAND(S) WERE NOT ISSUED DUE TO CONFIRMATION DENIAL

Explanation: The requested commands were not issued because of you denying the commands at the command confirmation panel.

System Action: The commands are not issued.

User Response: None.

BMC31837E  THE FIRST CHARACTER OF THE FIELD MUST BE ALPHABETIC

Explanation: The first character of the field that the cursor is on does not begin with an alphabetic character as required.

System Action: None.

User Response: Correct the field to contain a valid string.
**BMC31838E**  **AT LEAST ONE OF THE VALUE FIELDS MUST BE SPECIFIED**

*Explanation:* To build a valid command, at least one of the value fields on the current panel must be specified.

*System Action:* None.

*User Response:* Enter a valid value into at least one of the value fields, or enter ‘CANCEL’ at the command line to abort the modify request.

**BMC31839E**  **THE INDICATED VALUE MUST BE IN THE SPECIFIED RANGE**

*Explanation:* The field that the cursor is at must be in the range indicated to the right of the field.

*System Action:* None.

*User Response:* Enter a valid value into the indicated value field, or enter CANCEL at the Command line to abort the modify request.

**BMC31841W**  **THE CURRENT REQUEST WAS CANCELLED BY THE USER**

*Explanation:* A command was not built for the previously selected DB2 parameter because the CANCEL command was issued from its dialog.

*System Action:* None.

*User Response:* None.

**BMC31842E**  **THE INDICATED INPUT FIELD MUST CONTAIN NUMERIC CHARACTERS (0-9)**

*Explanation:* The cursor is positioned on a value field that must contain a numeric value.

*System Action:* None.

*User Response:* Correct the value field to contain a valid numeric value, or enter CANCEL at the Command line to abort the modify request.

**BMC31843E**  **THE SUM OF MAX USERS AND MAX REMOTE ACTIVE CANNOT EXCEED 2000**

*Explanation:* When totaled together, the maximum users and maximum remote thread values exceed the DB2 maximum of 2000.

*System Action:* None.

*User Response:* Correct the value fields to contain values whose sum will not exceed the maximum, or type CANCEL on the Command line to abort the modify request.
BMC31846W  THE DELETE REQUEST FOR *type profile* WAS REJECTED

*Explanation:* The requested profile delete was not issued because of you denying the request at the delete confirmation panel.

*System Action:* The profile is not deleted.

*User Response:* None.

BMC31847I  THE *type profile* PROFILE RECORD HAS BEEN SUCCESSFULLY DELETED

*Explanation:* The requested profile (*type profile*) was successfully deleted.

*System Action:* The profile has been deleted.

*User Response:* None.

BMC31850I  THE UPDATE REQUEST FOR *type profile* HAS SUCCESSFULLY COMPLETED

*Explanation:* The profile was successfully updated in the KSDS.

*System Action:* None.

*User Response:* None.

BMC31851W  THE REQUESTED ELEMENT IS NOT SUPPORTED BY THIS VERSION OF OPERTUNE

*Explanation:* While trying to modify an existing element in a previously defined group or system profile, an element was encountered that is not supported by this version of the product. The element was added to the profile by a newer version of the product than the current dialogs.

*System Action:* The element modification is rejected.

*User Response:* If the requested element needs modification, re-enter the dialogs using the newer version of the product.

BMC31852E  THE SECURITY NAME SPECIFIED DOES NOT EXIST

*Explanation:* You entered a value in a security profile field, but the security name specified is not the name of a valid security profile.

*System Action:* The security name is not accepted.

*User Response:* Respecify the value to indicate a security name that is currently defined in the KSDS. For a list of those names, enter ?.

BMC31853E  THE AUTHORIZATION SPECIFIED IS NOT ONE OF THE VALID AUTHORIZATIONS

*Explanation:* The ADD command did not specify a valid authorization entry as a parameter.

*System Action:* None.

*User Response:* For a list of valid authorizations, issue the ADD command without any parameters.
BMC31854E  THE REQUESTED ELEMENT IS ALREADY IN THE TABLE

Explanation: You entered a value in the new element field of the panel. However, the element specified is already contained as part of the profile. There can be only one occurrence of an element for each profile.

System Action: The element add is rejected.

User Response: Correct the name of the element you want to add.

BMC31855E  type NAMES MUST BE len CHARACTERS OR LESS IN LENGTH

Explanation: The profile name specified in the COPY command is too long for the profile type. The maximum length of system profile names is 4 characters; all other profile types have a maximum of 8 characters.

System Action: The COPY command is rejected.

User Response: Correct the name of the profile you want to copy from.

BMC31856E  THE NAME TO COPY FROM IS THE SAME AS THE ONE BEING EDITED

Explanation: The profile name specified in the COPY command is the same as the one currently being edited. This is not allowed.

System Action: The COPY command is rejected.

User Response: Correct the name of the profile you want to copy from.

BMC31857W  THE COPY COMMAND WAS CANCELLED SINCE AN ENTRY WAS NOT SELECTED

Explanation: You did not select a profile from the list of eligible profiles on the Copy panel.

System Action: The COPY command is rejected.

User Response: None.

BMC31858W  THERE ARE NO type ENTRIES AVAILABLE TO COPY FROM

Explanation: There are no profiles of the current type (type) for the specified OPERTUNE to make a copy of.

System Action: The COPY command is rejected.

User Response: None.

BMC31859E  type copy CANNOT BE COPIED FROM AS IT DOES NOT EXIST

Explanation: The profile to copy that you specified (type copy) does not exist in the profile data set.

System Action: The COPY command is rejected.

User Response: Specify a valid profile name.
BMC31860I  THE COPY REQUEST HAS SUCCESSFULLY COMPLETED

Explanation: The requested profile has been copied over the profile currently being modified.

System Action: None.

User Response: None.

BMC31864I  THE HOST OPERTUNE HAS BEEN SET TO name

Explanation: The host OPERTUNE has been set to the indicated name (name). This host was selected explicitly by you (through a panel), or implicitly. A host system will be implicitly selected when the previous host system is not currently active and there is only one other eligible candidate currently active.

System Action: None.

User Response: None.

BMC31865E  THE CHARACTER INDICATED MUST BE ONE OF THE VALID GROUP LEGENDS

Explanation: The cursor is positioned to a character that is not defined in the legends table. All legend characters specified in the day of week map must be defined in the legend table.

System Action: None.

User Response: Correct the invalid legend by changing it to one of the legends in the table or adding additional groups to the legend table.

BMC31869E  THE GROUP LEGEND TABLE CONTAINS THE MAX NUMBER OF GROUPS POSSIBLE

Explanation: You attempted to add another group to the schedule, but the legend table already contains the maximum number of entries allowed (36).

System Action: The group add is rejected.

User Response: Determine if any of the groups specified in the legends table can be deleted or merged together. If not, contact BMC Software Customer Support to determine if the limit can be increased.

BMC31870E  THE REQUESTED PROFILE CANNOT BE ADDED AS IT ALREADY EXISTS

Explanation: You entered a value in the new profile field, but the profile specified is already in the current table.

System Action: The profile add is rejected.

User Response: Respecify the value to indicate a profile that is not already in the current table.
**BMC31871E**  THE FIELD MUST CONTAIN EITHER A NUMERIC OR A DELTA VALUE

*Explanation:* The cursor is positioned in a value field that must contain a numeric (0-9) or a delta (+, -, %) value.

*System Action:* None.

*User Response:* Correct the value field to contain a valid numeric or delta value, or type CANCEL on the Command line to abort the request.

**BMC31872E**  THE MAXIMUM NUMBER OF ROWS ALLOWED HAVE BEEN ADDED TO THE TABLE(S)

*Explanation:* You entered a value in the new system field, but the current table already contains the maximum number of entries allowed.

*System Action:* The system add is rejected.

*User Response:* Determine if any of the systems specified in the current table can be deleted. If not, contact BMC Software Customer Support to determine if the limit can be increased.

**BMC31875E**  THE SPECIFIED SUBSYSTEM NAME IS NOT VALID FOR THE OPERTUNE SYSTEM

*Explanation:* The subsystem name field that the cursor is positioned to is not one of the names presented in the allowable subsystem name list on the right.

*System Action:* None.

*User Response:* Change the indicated subsystem name to one of the names in the allowable list, or change the corresponding OPERTUNE profile to add the indicated DB2 subsystem to its list.

**BMC31876E**  AN ENTRY ALREADY EXISTS FOR THIS SUBSYSTEM NAME

*Explanation:* The subsystem name field that the cursor is positioned to has been previously specified in the list.

*System Action:* None.

*User Response:* Change the indicated subsystem name to one of the names in the allowable list that is not already in the list, or remove the indicated subsystem name from the list.

**BMC31879W**  THE REQUESTED ENTRY DOES NOT EXIST

*Explanation:* You attempted to select a row in the current table through the Command line, but the row specified in the command does not exist in the table.

*System Action:* The command is not processed.

*User Response:* Correct the select command to specify a valid row in the current table.
BMC31880W  THE VTAM SESSION FOR THE TARGET OPERTUNE IS NOT UP

Explanation: The required sessions between the host OPERTUNE and the target OPERTUNE are not currently active. These are required for the requests and responses to be transmitted.

System Action: The request is not processed.

User Response: Select a different target OPERTUNE, or contact your OPERTUNE administrator to see if it can be brought up.

BMC31882E  THE REQUESTED ELEMENT DOES NOT ALLOW THE RESET COMMAND

Explanation: The RESET command is not supported for the requested element.

System Action: The request is rejected.

User Response: None.

BMC31883E  THE VALUE SPECIFIED IS NOT IN THE LIST TO THE RIGHT OF THE FIELD

Explanation: The value field that the cursor is positioned to contains a value that is not one of the acceptable values listed to the right of the field in error.

System Action: None.

User Response: Enter one of the valid values into the indicated value field, or enter CANCEL at the Command line to abort the modify request.

BMC31884E  FIRST CHARACTER MUST BE ALPHA/NATIONAL, OTHERS ALPHANUMERIC/NATIONAL

Explanation: The string at the cursor location is invalid. The first character must be alpha or a national character. All subsequent characters must be alphanumeric or national characters.

System Action: None.

User Response: Correct the field in error to specify a string that meets the required standards.

BMC31885E  THE OPTION SPECIFIED IS NOT VALID FOR THIS PANEL

Explanation: You entered an option that is not one of the valid panel options listed to the right of the input field.

System Action: None.

User Response: Correct the option specified to be one of those list to the right of the input field.
BMC31888E EACH QUALIFIER MUST BE 1-8 ALPHANUMERIC CHARACTERS, THE 1ST ALPHABETIC

Explanation: The data set name specified does not meet the requirements for a standard data set name.
System Action: None.
User Response: Change the value field to meet the instructions to the right of the field, or type CANCEL on the Command line to abort the modify request.

BMC31889E THE INDICATED CHARACTER MUST BE ALPHABETIC(A-Z) OR NUMERIC(0-9)

Explanation: The RLIMIT table suffix indicator must contain only alphanumeric characters.
System Action: None.
User Response: Change the value field to meet the instructions to the right of the field, or type CANCEL on the Command line to abort the modify request.

BMC31890I THE CHANGES TO THE CURRENT PROFILE HAVE BEEN RESET

Explanation: This message is issued in response to the UNDO command from a profile modification panel. The command has successfully completed.
System Action: None.
User Response: None.

BMC31891I ENTER A VALUE FOR THE REQUIRED FIELD AT THE CURSOR POSITION

Explanation: The cursor is positioned in a panel field that is required to complete a valid profile. This field must be specified for the profile to be updated.
System Action: None.
User Response: Specify a valid value for the indicated field, or specify one of the valid commands to override the value (CANCEL, UNDO, or COPY).

BMC31892E THE SPECIFIED FIELD MUST CONTAIN HEXADECIMAL DIGITS (0-9,A-F)

Explanation: The cursor is positioned in a panel field that is required to contain only hexadecimal digits.
System Action: None.
User Response: Specify a valid value for the indicated field.
**ONLY ONE DATA SET PER COPY SET MAY BE SELECTED AT ANY ONE TIME**

*Explanation:* You selected two or more rows from the same copy set (COPY 1 or COPY 2). This is an error since they would both have updated the same input field.

*System Action:* None.

*User Response:* Select only one data set from each copy set.

**ENTER FIRST, NEXT, LAST, OR A NUMBER BETWEEN 1 AND THE # OF LOGS +1**

*Explanation:* The value specified for the position of the new active log in the BSDS is invalid.

*System Action:* None.

*User Response:* Change the value specified to FIRST, NEXT, LAST, or an explicit number in the range of 1 to the number of currently existent active logs plus 1.

**AT LEAST ONE OF THE FILTERS MUST BE SPECIFIED FOR CANCEL ALL**

*Explanation:* This message is issued in response to a CANCEL ALL request, none of the filter specifiers contain a value. At least one of them is required for the CANCEL ALL command.

*System Action:* The CANCEL ALL request is not accepted.

*User Response:* Specify at least one of the filter specifiers, and reissue the CANCEL ALL command.

**THE REQUESTED FEATURE IS INVALID FOR THE REQUEST TYPE**

*Explanation:* The requested feature is not applicable to the subsystem specified.

*System Action:* The request is rejected.

*User Response:* Either switch to a subsystem for which the request is valid or select a command that is valid for the current subsystem.

**THE VALUE SPECIFIED RESULTS IN AN ARITHMETIC OVERFLOW**

*Explanation:* The value entered cannot fit into a full word.

*System Action:* None.

*User Response:* Enter a valid value into the indicated value field or enter the CANCEL command to abort the modify request.
BMC31915E  THE START ASYNCHRONOUS WRITE VALUE MUST BE GREATER THAN STOP VALUE

Explanation: The SET BUFPOOL command specified would set the stop asynchronous write threshold below the start asynchronous write threshold.

System Action: The command is rejected.

User Response: Change the start and stop thresholds to valid values and resubmit the command.

BMC31916E  THE START ASYNCHRONOUS WRITE VALUE MUST BE LESS THAN SYNC VALUE

Explanation: The SET BUFPOOL command specified would set the start asynchronous write threshold above the start synchronous write threshold.

System Action: The command is rejected.

User Response: Change the thresholds to valid values and resubmit the command.

BMC31917E  THE STOP ASYNCHRONOUS WRITE VALUE MUST BE LESS THAN THE SYNC VALUE

Explanation: The SET BUFPOOL command specified would set the start synchronous write threshold below the stop asynchronous write threshold.

System Action: The command is rejected.

User Response: Change the thresholds to valid values and resubmit the command.

BMC31918E  CANNOT CONVERT RUSIZE INTO MANTISSA/EXponent FORM

Explanation: The value specified for RUSIZE is not a valid VTAM RUSIZE. A VTAM RUSIZE must be a value that can be specified as M*2**E: where M is the mantissa and must be between 8 and 15; and E is the exponent and must be between 5 and 12.

System Action: The RUSIZE value is not accepted.

User Response: Correct the RUSIZE specified to be a value that can be expressed in the form shown above. For additional information, consult your VTAM manuals.

BMC31919I  SELECT ONE OF THE OPTIONS VALID FOR THIS PANEL

Explanation: No option was selected from the list of valid options.

System Action: None.

User Response: Examine the list of valid options for this panel. Specify one and press Enter.
<table>
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<tr>
<th>Message Code</th>
<th>Message Title</th>
<th>Explanation</th>
<th>System Action</th>
<th>User Response</th>
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</thead>
<tbody>
<tr>
<td>BMC31920E</td>
<td>THE REQUESTED LANGUAGE IS NOT SUPPORTED BY OPERTUNE</td>
<td>The language specified at the cursor position is not supported by OPERTUNE.</td>
<td>None.</td>
<td>Correct the language specified to one that is supported by OPERTUNE and installed at your location. For a list of those languages, enter ( ? ) at the cursor position.</td>
</tr>
<tr>
<td>BMC31921E</td>
<td>THE REQUESTED LANGUAGE IS NOT INSTALLED AT YOUR SITE</td>
<td>The language specified at the cursor position is not installed at your location.</td>
<td>None.</td>
<td>Select a different language, or contact your OPERTUNE administrator to have the requested language installed.</td>
</tr>
<tr>
<td>BMC31923E</td>
<td>THE COMMAND CONTAINED ONE OR MORE SYNTAX ERRORS</td>
<td>There was at least one syntax error encountered during command processing. Additional information about the syntax error can be found in the command response text.</td>
<td>The command request is rejected.</td>
<td>Correct the syntax error, and reissue the command.</td>
</tr>
<tr>
<td>BMC31924E</td>
<td>value IS NOT VALID FOR THE CURRENT COMMAND</td>
<td>The indicated value (value) is not a valid parameter for the command.</td>
<td>The command is rejected.</td>
<td>Determine a valid keyword for the command, and reissue the command.</td>
</tr>
<tr>
<td>BMC31925E</td>
<td>AN ERROR OCCURRED WHILE ATTEMPTING TO PARSE THE COMMAND</td>
<td>The panel command line parser was unable to successfully parse the command.</td>
<td>None.</td>
<td>Ensure that the command has matching quotes and parentheses. If it does, try to reduce the overall size of the command.</td>
</tr>
</tbody>
</table>
**BMC31926W**  
**THERE ARE NO ACTIVE THREADS/CONNECTIONS WITH THE QUALIFIERS SPECIFIED**

*Explanation:* The CANCEL command’s qualifier specifications did not match those of any active thread/connection in the target subsystem.  
*System Action:* The command request is rejected.  
*User Response:* Correct the cancel request to specify a valid thread/connection.

**BMC31927E**  
**MULTIPLE ACTIVE THREADS/CONNECTIONS MEET THE QUALIFIERS SPECIFIED**

*Explanation:* The CANCEL command’s qualifier specifications were not specific enough to narrow the thread/connection to be cancelled down to just one thread/connection and the ALL keyword was not specified.  
*System Action:* The command request is rejected.  
*User Response:* Change the CANCEL command to contain the ALL keyword or to specify additional qualifier specifiers to further qualify the request.

**BMC31928W**  
**THE REQUESTED THREAD/CONNECTION IS ALREADY TERMINATING**

*Explanation:* The thread/connection specified by the CANCEL command is already undergoing termination processing (most likely rollback).  
*System Action:* Command processing continues.  
*User Response:* None.

**BMC31929W**  
**THE REQUESTED RESOURCE CURRENTLY HAS NO THREADS ACCESSING IT**

*Explanation:* A request was made to free a resource, but the resource does not have any threads currently accessing it.  
*System Action:* Command processing continues.  
*User Response:* None.

**BMC31930E**  
**THE COMMAND WAS UNABLE TO COMPLETE SUCCESSFULLY**

*Explanation:* The command request was unable to complete. One or more messages indicating the exact cause of the problem are contained in the command response buffer.  
*System Action:* The command request is rejected.  
*User Response:* Examine the additional messages in the command response buffer to determine the exact cause of the problem.
BMC31932W  OPERTUNE DOES NOT HAVE ANY CHANGES IN EFFECT FOR THE TARGET DB2

Explanation: This message is issued in response to the CURRENT command on the group profile edit panel, the target OPERTUNE does not have any outstanding element changes for the target subsystem.

System Action: None.

User Response: Build the group profile manually by entering the desired element names in the Add Additional Element(s) field.

BMC31933I  THE CURRENT VALUES HAVE BEEN RETURNED AS REQUESTED

Explanation: This message is issued in response to the CURRENT command. The command has successfully completed.

System Action: None.

User Response: None.

BMC31934I  THE ARCHIVE LOG SPECIFIED IS NOT RECORDED IN THE BSDS

Explanation: The archive log data set specified in the LIKE field is not defined in the subsystem’s BSDS. The target of the LIKE filed must indicate an existing archive log data set.

System Action: The request is rejected.

User Response: Change the specified archive log data set name to one that exists in the BSDS.

BMC31937E  NON-OPERTUNE SUBSYSTEM CMDS MUST START WITH A HYPHEN ("-DIS THD(*)")

Explanation: Any non-OPERTUNE command to be issued to a subsystem must be preceded by a hyphen, as in SPUFI.

System Action: None.

User Response: reissue the command with a hyphen as the first character.

BMC31939E  THE VDWQT VALUE MUST BE LESS THAN OR EQUAL TO DWQT

Explanation: The VDWQT buffer pool attribute must be less than or equal to DWQT.

System Action: The command request is rejected.

User Response: Correct the VDWQT or DWQT attribute values.
BMC31942E  MAX REMOTE ACTIVE CANNOT BE GREATER THAN MAX CONCURRENT

Explanation: The MAX REMOTE ACTIVE attribute value cannot be greater than the MAX REMOTE CONCURRENT value.

System Action: The command request is rejected.

User Response: Specify a smaller MAX REMOTE ACTIVE attribute value or a larger MAX REMOTE CONCURRENT attribute value to correct the problem.

BMC31943E  THE REQUIRED COMMAND PARAMETER WAS MISSING FROM THE COMMAND

Explanation: The issued command requires an additional parameter.

System Action: The command is rejected.

User Response: Add the required parameter to the command, and reissue the command.

BMC31944E  THE REQUESTED THREAD IS NOT CANCELABLE BY OPERTUNE

Explanation: OPERTUNE will not cancel distributed threads that are inactive because the maximum remote active threshold has been exceeded.

System Action: The cancel request is rejected.

User Response: Cancel the thread after it has become active.

BMC31945E  ONE OR MORE PARAMETERS ARE MUTUALLY EXCLUSIVE

Explanation: One or more of the parameters specified are mutually exclusive with a previously specified parameter. The cursor is placed on the first parameter found to conflict with a previously specified parameter.

System Action: The input is not accepted.

User Response: Check the parameters to determine which ones are in conflict. Correct the parameters as necessary and press Enter.

BMC31946E  THE ELEMENT OR PARAMETER IS NOT SUPPORTED FOR THIS SUBSYSTEM

Explanation: The requested element or parameter is not valid for either the DB2 subsystem or for the release level of the subsystem.

System Action: The request is rejected.

User Response: For a parameter-level error, remove the invalid parameter and resubmit the command. For an element-level error, select another element.

BMC31948E  THE TABLE SPACE SELECTED IS NOT PARTITIONED

Explanation: A partition table space list was requested for a table space that is not partitioned.

System Action: The request is rejected.

User Response: Select a table space that is partitioned.
**BMC31951E**  MODULE IDCAMS COULD NOT BE LOADED

Explanation: A load error occurred loading the Access Method Services IDCAMS module.

System Action: The CREATE command is rejected.

User Response: Ensure that Access Method Services is available in a STEPLIB or system LINKLIST library for your ISPF session.

**BMC31952E**  THE DATA COLLECTOR INTERFACE COULD NOT BE LOADED

Explanation: The function requested requires the use of the Data Collector interface routine. The attempt to load this routine failed.

System Action: The request is rejected.

User Response: Check for additional messages to determine the reason why the load failed. If there are no messages, check the OPERTUNE load library for the existence of DDTKAMIF. If this is not found, contact BMC Software Technical Support.

**BMC31962I**  THE TARGET SUBSYSTEM(S) DO NOT HAVE ANY GROUP BUFFER POOLS ALLOCATED

Explanation: There are no group buffer pools allocated. Castout cannot be performed.

System Action: None.

User Response: None.

**BMC31963I**  THERE ARE NO GROUP BUFFER POOL DEPENDENT TABLES

Explanation: There are no group buffer pool dependent tables. Castout cannot be performed.

System Action: None.

User Response: None.

**BMC31964I**  THERE ARE NO CASTOUT BACKUP OWNERS FOR THIS DATASET

Explanation: Castout backup owners are other data sharing group members that have inter-DB2 read/write interest in a data set. Normally, a backup owner will not become the castout owner until the castout owner no longer has inter-DB2 read/write interest in the data set.

System Action: None.

User Response: None.
BMC31970E  THE CATALOG CANNOT BE ACCESSED TO OBTAIN THE DATA

Explanation: A catalog access failed with a non-zero return code.
System Action: The request fails.
User Response: Contact BMC Software Customer Support.

BMC31971E  THE REQUEST DATA IS NOT AVAILABLE FOR THIS REQUEST

Explanation: A catalog access has been completed with a zero return code, but no data was returned.
System Action: The request fails.
User Response: Contact BMC Software Customer Support.

BMC31973E  EMBEDDED COMMAS ARE NOT ALLOWED IN THIS FIELD

Explanation: One or more commas have been specified in the field (the cursor is located in the effected field). This field may not contain commas.
System Action: None.
User Response: Remove the commas from the field.

BMC31974E  AN SVC 99 ALLOCATION ERROR OCCURRED

Explanation: An SVC 99 allocation has failed.
System Action: The request is rejected.
User Response: Check the OPERTUNE log for allocation error messages that contain SVC 99 return codes.

BMC31975E  THE REQUEST WAS REJECTED AT THE TARGET

Explanation: The request is aborted.
System Action: None.
User Response: None.

BMC31976E  THE PAGE SET MUST BE ONLINE FOR THE REQUEST

Explanation: The page set must have a status of ONLINE for this request.
System Action: The request is rejected.
User Response: Add the page set and retry the request.

BMC31977E  THE VALUE IS NOT AN EXACT MULTIPLE OF THE REQUIRED NUMBER

Explanation: The entered value must be a multiple of 4.
System Action: The request is rejected.
User Response: Enter a value that is a multiple of 4.
BMC31978E  THE INDICATED ROW IS NOT SELECTABLE DUE TO ITS SYSTEM STATUS

Explanation: The selected row cannot be set as a primary or secondary target because its system status shows that it is not currently available.

System Action: The selection is rejected.

User Response: Select a target whose status indicates it is currently available or have the selected system started.

BMC31979E  ONE OF THE ENTRIES MUST BE SELECTED AS A PRIMARY SYSTEM

Explanation: One of the targets must be selected as a primary target. Currently, there is not an entry selected as a primary target.

System Action: None.

User Response: Select one of the entries as your primary system, or type CANCEL on the command line, and press Enter to abort the selection.

BMC31980E  MODULE DDTTAUTH IS NOT IN THE IKJTSOxx AUTHORIZED PROGRAM LIST

Explanation: Module DDTTAUTH detected that it is not APF authorized. This is accomplished during the product installation by adding module DDTTAUTH to the IKJTSOxx PARMLIB member.

System Action: The dialogs are unable to communicate with the OPERTUNE started task.

User Response: Refer to the installation procedures. Make certain that module DDTTAUTH is in the IKJTSOxx PARMLIB member and that either the system has been IPLed or the appropriate command has been issued to activate that member.

BMC31981E  THE COMMAND REQUEST IS INVALID ON THIS PANEL

Explanation: The command is not valid on the current panel because of recursion possibilities.

System Action: The command is rejected.

User Response: None.

BMC31982E  THE REQUESTED FUNCTION REQUIRES A TARGET type BE SELECTED

Explanation: The requested panel requires a target of the specified type be selected as either the primary or a secondary system.

System Action: The panel is not invoked.

User Response: Change the current primary or secondary selection to select a valid target, and request the panel again.
BMC31983E  THE REQUESTED FUNCTION REQUIRES AN ACTUAL type BE SELECTED

Explanation: The requested panel requires an actual OPERTUNE system be selected. The N/A selection is insufficient as a target of this panel.

System Action: The panel is not invoked.

User Response: Change the current primary or secondary OPERTUNE selection to select an actual OPERTUNE system, and request the panel again.

BMC31984E  THE REQUESTED FUNCTION REQUIRES A PRIMARY type BE SELECTED

Explanation: The requested panel requires the primary target be of the type indicated. The current primary target is not that type.

System Action: The panel is not invoked.

User Response: Change the current primary selection to select a target of that type, and request the panel again.

BMC31985I  THE PREVIOUS PANEL DOES NOT ALLOW FOR THE MODIFICATION OF THIS TYPE

Explanation: The data on the previous panel is dependent upon the target selection of the current panel. This means that the selection of new targets will not be allowed.

System Action: None.

User Response: If you wish to change one or more of the targets, exit the panels until you get to a panel whose contents do not depend upon the target selection. Enter the desired panel again.

BMC31986E  THE ADD COMMAND REQUIRES THE SPECIFICATION OF A PROFILE NAME TO ADD

Explanation: The ADD command was entered from the profile selection panel. The command did not contain the name of the profile to add. This name should follow the ADD command verb.

System Action: The command is rejected.

User Response: Add the name of the new profile to the end of the ADD command.

BMC31987E  THE TARGET NAME MUST BE 4 CHARACTERS OR LESS IN LENGTH

Explanation: The OPERTUNE name specified was too long. It must be 4 characters or less in length.

System Action: The command is rejected.

User Response: Change the target OPERTUNE name to that of a valid OPERTUNE system.
### BMC31988E  EMBEDDED BLANKS ARE NOT ALLOWED IN THIS FIELD

**Explanation:** The field the cursor is on has one or more embedded blanks within it. Embedded blanks are not allowed in this field.

**System Action:** None.

**User Response:** Correct the field to remove the blanks.

### BMC31989E  value IS LONGER THAN THE MAXIMUM OF nn CHARACTERS ALLOWED

**Explanation:** The indicated command parameter exceeded the maximum length allowed for that parameter.

**System Action:** The command is rejected.

**User Response:** Correct the command to specify valid parameters, and reissue the command.

### BMC31990E  THE CURRENT TABLE REQUIRES AT LEAST ONE ROW REMAIN

**Explanation:** The subsystem name table cannot be emptied. At least one row must always be defined.

**System Action:** The delete request is rejected.

**User Response:** None.

### BMC31991E  THE CURRENT COMMAND IS INVALID WITH A DSGROUP AS THE PRIMARY TARGET

**Explanation:** The CURRENT command is only valid with a subsystem as the primary target subsystem. With a data sharing group as the target, OPERTUNE does not know from where to obtain the current value.

**System Action:** The command is rejected.

**User Response:** Change the primary target subsystem to the one from which you want to obtain the current value, and enter the command again.

### BMC31992W  THE RESET COMMAND FAILED AS THE ELEMENT IS NOT CURRENTLY MODIFIED

**Explanation:** The RESET command had no effect since the element has not been modified by OPERTUNE.

**System Action:** None.

**User Response:** None.
<table>
<thead>
<tr>
<th>Message Code</th>
<th>Message Description</th>
<th>Explanation</th>
<th>System Action</th>
<th>User Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC31993W</td>
<td>THERE IS NO GROUP(S) SET AT THE TARGET SUBSYSTEM</td>
<td>For a QUERY command, there are no group or groups set at the target subsystem. For a RESET command, the requested group is not set.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>BMC31994W</td>
<td>THERE IS NO SCHEDULE(S) SET AT THE TARGET SUBSYSTEM</td>
<td>There are no schedule or schedules set at the target subsystem.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>BMC31995W</td>
<td>THE SET COMMAND FAILED AS THE REQUESTED PROFILE IS ALREADY SET</td>
<td>The SET command specified a group or schedule that has already been set. It cannot be set more than once without an intermediate reset.</td>
<td>The command is rejected.</td>
<td>If the group or schedule needs to be implemented again, issue a RESET command for it followed again by the SET command.</td>
</tr>
<tr>
<td>BMC31996W</td>
<td>ONE OF THE TARGETED SUBSYSTEMS IS NOT ENABLED FOR DATA SHARING</td>
<td>The current request requires that the target subsystem be enabled for data sharing. One or more of the targets are not.</td>
<td>The request is rejected for those targets which are not enabled for data sharing.</td>
<td>None.</td>
</tr>
<tr>
<td>BMC31997E</td>
<td>AN ERROR OCCURRED WHILE ATTEMPTING TO WRITE THE SUBSYSTEM BSDS</td>
<td>The request failed while attempting to update one of the subsystem’s BSDS records.</td>
<td>The command is aborted.</td>
<td>Check the response messages from the command for more information regarding the error.</td>
</tr>
<tr>
<td>BMC31998E</td>
<td>AN ERROR OCCURRED WHILE ATTEMPTING TO READ THE SUBSYSTEM BSDS</td>
<td>The request failed while attempting to read one of the subsystem’s BSDS records.</td>
<td>The command is aborted.</td>
<td>Check the response messages from the command for more information regarding the error.</td>
</tr>
</tbody>
</table>
BMC31999W  NO TABLE SPACES THAT ARE IN USE MATCH THE COMMAND WILDCARD(S)

Explanation: The FREE command specified wildcards for one or more of the table space name fields. There are no table spaces in use which match the wildcards.

System Action: Command processing continues.

User Response: None.
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