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Preface

This manual provides reference information about the classic interface to OMEGAMON II® for DB2, Version 540, a component of OMEGAMON XE for DB2 on z/OS. The information provided includes descriptions of screen functions, parameters, and output fields.

Who should read this book
This manual is intended for users who are familiar with performance monitoring software. It contains screen illustrations and descriptions of all the realtime screens in the product’s classic interface. This includes the application trace facility screens and the screens that display near-term historical information.

Documentation set information
- OMEGAMON II for DB2 Tuning Guide, Version 540
- OMEGAMON II for DB2 Historical Reporting Guide, Version 540
- OMEGAMON II for DB2 Configuration and Customization Guide, Version 540
- Candle Products Messages Manual

Where to look for more information
In addition to the manuals described, OMEGAMON II for DB2 includes an online data dictionary for the historical component.

Note that the asynchronous batch mode for running the Application Trace Facility is only available from the CUA interface. Therefore, this information is covered in the User’s Guide and not in this manual.

The OMEGAMON II for DB2 Historical Reporting Guide, Version 540 contains detailed information about all other historical functions, namely the online collector, the batch extractor, the summarizer, and the historical reporter. It also covers the ISPF dialog, which allows you to set options for the historical functions and to produce reports.
For more information related to this product, please see the

- technical documentation CD-ROM that came with your product
- technical documentation information available on the Candle Web site at www.candle.com
- online help provided with this product
Adobe Portable Document Format

Printing this book

Candle supplies documentation in the Adobe Portable Document Format (PDF). The Adobe Acrobat Reader will print PDF documents with the fonts, formatting, and graphics in the original document. To print a Candle document, do the following:

1. Specify the print options for your system. From the Acrobat Reader Menu bar, select **File > Page Setup**… and make your selections. A setting of 300 dpi is highly recommended as is duplex printing if your printer supports this option.

2. To start printing, select **File > Print...** on the Acrobat Reader Menu bar.

3. On the Print pop-up, select one of the **Print Range** options for
   - All
   - Current page
   - Pages from: [ ] to: [ ]

4. (Optional). Select the Shrink to Fit option if you need to fit oversize pages to the paper size currently loaded on your printer.

Printing problems?

The print quality of your output is ultimately determined by your printer. Sometimes printing problems can occur. If you experience printing problems, potential areas to check are:

- settings for your printer and printer driver. (The dpi settings for both your driver and printer should be the same. A setting of 300 dpi is recommended.)
- the printer driver you are using. (You may need a different printer driver or the Universal Printer driver from Adobe. This free printer driver is available at www.adobe.com.)
- the halftone/graphics color adjustment for printing color on black and white printers (check the printer properties under **Start > Settings > Printer**). For more information, see the online help for the Acrobat Reader.
- the amount of available memory in your printer. (Insufficient memory can cause a document or graphics to fail to print.)

For additional information on printing problems, refer to the documentation for your printer or contact your printer manufacturer.

Contacting Adobe

If additional information is needed about Adobe Acrobat Reader or printing problems, see the Readme.pdf file that ships with Adobe Acrobat Reader or contact Adobe at www.adobe.com.
Adding annotations to PDF files

If you have purchased the Adobe Acrobat application, you can add annotations to Candle documentation in .PDF format. See the Adobe product for instructions on using the Acrobat annotations tool and its features.
Documentation Conventions

Introduction

Candle documentation adheres to accepted typographical conventions for command syntax. Conventions specific to Candle documentation are discussed in the following sections.

Panels and figures

The panels and figures in this document are representations. Actual product panels may differ.

Required blanks

The slashed-b (\) character in examples represents a required blank. The following example illustrates the location of two required blanks.

```
!beBA^ServiceMonitor!b0990221161551000
```

Revision bars

Revision bars (|) may appear in the left margin to identify new or updated material.

Variables and literals in command syntax examples

In examples of command syntax for the OS/390, VM, OS/400, and NonStop Kernel platforms, uppercase letters indicate actual values (literals) that the user should type; lowercase letters indicate variables that represent data supplied by the user:

```
LOGON APPLID (cccccccc)
```

However, for the Windows and UNIX platforms, variables are shown in italics:

```
-candle.kzy.instrument.control.file=instrumentation_control_file_name
-candle.kzy.agent.parms=agent_control_file_name
```

*Note:* In ordinary text, variable names appear in italics, regardless of platform.

Symbols

The following symbols may appear in command syntax:

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<tr>
<th>Table 1. Symbols in Command Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symbol</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Table 1. Symbols in Command Syntax

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>[]</td>
<td>Denotes optional arguments. Those arguments not enclosed in square brackets are required. Example: <strong>APPLDEST DEST [ALTDEST]</strong> In this example, DEST is a required argument and ALTDEST is optional.</td>
</tr>
<tr>
<td>{}</td>
<td>Some documents use braces to denote required arguments, or to group arguments for clarity. Example: **COMPARE {workload} - REPORT={SUMMARY</td>
</tr>
<tr>
<td>_</td>
<td>Default values are underscored. Example: **COPY infile outfile - [COMPRESS={YES</td>
</tr>
</tbody>
</table>
What’s New

Introduction

This section identifies the enhancements made to OMEGAMON II for DB2 in conjunction with OMEGAMON XE for DB2 on z/OS, Version 300. The changes and additions in OMEGAMON II for DB2 provide new function, in addition to reflecting support for features in IBM DB2 Version 8.1. OMEGAMON II for DB2 enables you to obtain additional information about the performance of your systems. This information allows you more flexibility in managing various types of threads. An overview of each new or changed function follows.

Note: With this release, OMEGAMON II for DB2 no longer supports IBM DB2 Version 5.

Historical Reporter redesign

With OMEGAMON II for DB2, significant enhancements were made to the historical reporting component. Some of these new features are:

- Sequential output files are produced from the online collector.
- All record types can be loaded into DB2 tables using either the LOAD utility or using SQL INSERT.
- Near term history collector for displays is configured separately from long term history for reports.
- New fields have been added to the Summarizer.

New IFCID-based reports

- Numerous new IFCID-based reports are provided. See the OMEGAMON II for DB2 Historical Reporting Guide, Version 540, for a list of the supported IFCIDs. See the README provided with this product for instructions on generating the IFCID-based reports.
- You can generate your own reports, based on the IFCIDS selected, using the product-provided COBOL, C, and SAS record layouts. All instrumentation record types (IFCIDs) are supported. The data are extracted from SMF, GTF or from the Online Collector input.
64-bit addressing support

Version 8 of DB2 UDB for z/OS supports 64-bit virtual storage. The zSeries 64-bit architecture allows DB2 UDB for z/OS to move various storage areas above the 2-GB bar. OMEGAMON II for DB2 now provides the ability to display information from above the 2-GB bar structures.

64-bit addressing support applies to the:

- EDM pool
- buffer pools
- sort pools
- RID pools

Long name support

OMEGAMON II for DB2 includes support for long object names. New displays are provided in support of this feature.

Unicode support

Unicode support includes character conversion from Unicode to EBCDIC for online displays and batch reports.

Enclave support

New displays for stored procedures using Work Load Manager (WLM) enclaves include:

- Enclave Token
- Service Class Period
- Performance Index
- Service Class
- WLM Environment Name

Stored procedure Address Spaces is being phased out in DB2 Version 8. All stored procedures now use WLM.

New filtering for Near Term History display

These keywords are added to the Near Term History display:

- COMMIT
- CORRID
- DB2 CPU TIME
- DB2 ELAP TIME
- DEADLK/TIMEOUT
- I/O ELAP TIME
See “Near-Term Thread History Filter Options” on page 512 for descriptions of these new fields.

**New DSNZPARM fields**

The DSNZPARM Thread Parameters panel now includes numerous new fields.

**Distributed Thread display improvements**

The Distributed Thread display improvements include the addition of these fields:

- Host Name
- Workstation identifier
- End user ID on workstation
- Transaction ID on workstation
Introduction

OMEGAMON II is a software performance monitor for the IBM® product DATABASE 2™ (DB2). It includes realtime and historical components to give you a comprehensive view of your DB2 subsystem.

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Realtime Component

The realtime monitor includes two user interfaces: the classic interface and the CUA interface. The classic interface is the OMEGAMON II original interface, which includes conventional menus and display screens to facilitate navigation through the product. The CUA interface complies with the IBM SAA™/CUA™ (Systems Application Architecture®/Common User Access™) guidelines, which promote ease of use in software interfaces.

Both interfaces allow you to monitor DB2. If you use the classic interface, the screens you see will look like the illustrations in this manual. If you use the CUA interface, the screens will be similar to those illustrated here, and they will have the same functionality.

The realtime component enables you to access the most current OMEGAMON II data through online displays. These displays provide information about thread use, locking conflicts, SQL calls, and so on. They also enable you to start and view an application trace to obtain realtime information about application flow and resource consumption.
Historical Component

Some information provided in the OMEGAMON II online displays is historical in nature. The near-term history screens allow you to view information that was gathered a few minutes or a few hours ago. The application trace facility (ATF) allows you to save trace data in a VSAM dataset so it can be viewed later.

The historical component consists of the following features:

- **Online data collector**: Gathers statistical and accounting information (including distributed database information), audit information, and DSNZPARM information from the DB2 subsystem and stores it in DB2 tables, VSAM datasets, and in sequential files as activity occurs.

- **Data extractor**: Extracts statistical, accounting, audit, DSNZPARM, and performance information from SMF and GTF and stores it in DB2 tables, VSAM datasets, and sequential files.

- **Data summarizer**: Takes detailed statistical and accounting data that was stored in DB2 tables, VSAM datasets, or sequential files by the collector or the extractor and consolidates it in a summarized format.

- **OMEGAMON II for DB2 Historical Reporter**: Generates reports using data stored in DB2 tables, sequential files and VSAM datasets.

For more information about the historical features of OMEGAMON II, see the *OMEGAMON II for DB2 Historical Reporting Guide*. 


Introduction

OMEGAMON II provides access to its realtime and historical components through the use of menus. The menus described in this chapter are the ones you will see when you use ISPF mode, which is the mode of operation that most fully supports the OMEGAMON II historical features. To access the first menu in the sequence, start an OMEGAMON II session in ISPF mode, as described in the OMEGAMON II for DB2 Configuration and Customization Guide.

If you do not use ISPF mode or if you do not install the historical features, some of these menus may not appear during an OMEGAMON II session.

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OMEGAMON II ISPF Primary Options Menu

The OMEGAMON II ISPF Primary Options Menu provides access to realtime screens, the historical reporter and other historical features, and, if they have been installed on your system, DB2 tools.

To access the ISPF Primary Options menu, enter the following TSO command:

```
%KD2SPF
```

Highlighting

The Primary Options Menu does not contain any highlighted fields.

Navigation

To choose one of the selections on this menu, type the character corresponding to the selection on the command line and press Enter.

The following is a short description of the navigation options available from the Primary Options Menu:

- **Realtime**: Provides access to OMEGAMON II realtime screens (classic interface). Using ISPF split-screen mode, you can toggle between realtime displays and historical features.

- **Historical**: Provides access to the OMEGAMON II historical reporter and other historical features. Also provides access to OMEGAMON II messages and the data dictionary.

- **DB2 Tools**: Provides access to the following DB2 tools, if they have been installed on your system:
  - !DB/WORKBENCH
  - !DB/MIGRATOR
  - !DB/SMU
  - !DB/EXPLAIN
  - !DB/DASD

- **Exit**: Exits the ISPF dialog.
OMEGAMON for DB2 - ISPF Mode

The OMEGAMON for DB2 - ISPF Mode screen appears if you select REALTIME on the Primary Options Menu. This screen enables you to access the Realtime Main Menu and to define PF keys.

OMEGAMON for DB2 - ISPF Mode

OPTION ===> OMONMSG
Specify:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 Subsys ID</td>
<td>The identifier of the DB2 subsystem to be monitored.</td>
</tr>
<tr>
<td>OBVTAM APPLID</td>
<td>The VTAM® application ID used by OBVTAM for the session.</td>
</tr>
<tr>
<td>User Profile</td>
<td>The suffix of the user profile to be used for the session.</td>
</tr>
<tr>
<td>Omegamon LROW</td>
<td>The number of logical rows to be used for the session.</td>
</tr>
<tr>
<td>SPLIT PF Key</td>
<td>The PF key that performs the split function.</td>
</tr>
<tr>
<td>SWAP PF Key</td>
<td>The PF key that performs the swap function.</td>
</tr>
<tr>
<td>RETURN PF Key</td>
<td>The PF key that performs the return function.</td>
</tr>
</tbody>
</table>

Please indicate PF Key numbers for Split, Swap, and Return functions.
Note: Omegamon PF Key defaults are overridden by these entries.

Enter L to Logon to Omegamon for DB2. X to exit.

Highlighting
The OMEGAMON for DB2 - ISPF Mode screen does not contain any highlighted fields.

Navigation
The OMEGAMON for DB2 - ISPF Mode screen allows you to access the classic interface of the realtime product by typing the required information, typing L, and pressing Enter.
The following is a short description of the navigation options and other specifications available on this menu:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 Subsys ID</td>
<td>The identifier of the DB2 subsystem to be monitored.</td>
</tr>
<tr>
<td>OBVTAM APPLID</td>
<td>The VTAM® application ID used by OBVTAM for the session.</td>
</tr>
<tr>
<td>User Profile</td>
<td>The suffix of the user profile to be used for the session.</td>
</tr>
<tr>
<td>Omegamon LROW</td>
<td>The number of logical rows to be used for the session.</td>
</tr>
<tr>
<td>SPLIT PF Key</td>
<td>The PF key that performs the split function.</td>
</tr>
<tr>
<td>SWAP PF Key</td>
<td>The PF key that performs the swap function.</td>
</tr>
<tr>
<td>RETURN PF Key</td>
<td>The PF key that performs the return function.</td>
</tr>
</tbody>
</table>
Realtime Main Menu

The Realtime Main Menu gives you an overview of the navigation options available through the OMEGAMON II classic interface. This screen displays a list of the screens to which you may navigate.

Highlighting

The Realtime Main Menu does not contain any highlighted fields.

Navigation

The Realtime Main Menu suggests navigation options. To go to the desired screen, type the letter associated with the screen on the top line and press Enter.

The following is a short description of the navigation options available from this menu:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Provides an overview of current DB2 activity.</td>
</tr>
<tr>
<td>Exceptions</td>
<td>Shows which OMEGAMON II exceptions have exceeded their threshold condition.</td>
</tr>
<tr>
<td>Thread Activity</td>
<td>Provides information about active DB2 threads.</td>
</tr>
<tr>
<td>Locking</td>
<td>Displays all lock conflicts. This screen displays information about the</td>
</tr>
<tr>
<td></td>
<td>object in contention, as well as its owner and all waiters.</td>
</tr>
<tr>
<td>Resource</td>
<td>Displays information related to the DB2 subsystem (such as buffer pool,</td>
</tr>
<tr>
<td>Managers</td>
<td>log manager, and EDM pool information).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY</td>
<td>Summary of DB2 activity</td>
</tr>
<tr>
<td>EXCEPTIONS</td>
<td>Current or potential system problems</td>
</tr>
<tr>
<td>THREAD ACTIVITY</td>
<td>Thread activity information</td>
</tr>
<tr>
<td>THREAD ACTIVITY</td>
<td>Thread activity information by Package</td>
</tr>
<tr>
<td>LOCKING CONFLICTS</td>
<td>Locking conflict information</td>
</tr>
<tr>
<td>RESOURCE MANAGERS</td>
<td>Resource manager, other DB2 subsystem information</td>
</tr>
<tr>
<td>APPLICATION TRACE</td>
<td>Trace and view application activity</td>
</tr>
<tr>
<td>DISTRIBUTED DATA</td>
<td>Distributed database system information</td>
</tr>
<tr>
<td>OBJECT ANALYSIS</td>
<td>Object and Volume information</td>
</tr>
<tr>
<td>MVS CONSOLE</td>
<td>MVS console to issue commands and view messages</td>
</tr>
<tr>
<td>DB2 CONSOLE</td>
<td>DB2 console to issue commands and view messages</td>
</tr>
<tr>
<td>RESOURCE MANAGERS</td>
<td>Resource manager, other DB2 subsystem information</td>
</tr>
<tr>
<td>APPLICATION TRACE</td>
<td>Trace and view application activity</td>
</tr>
<tr>
<td>DISTRIBUTED DATA</td>
<td>Distributed database system information</td>
</tr>
<tr>
<td>OBJECT ANALYSIS</td>
<td>Object and Volume information</td>
</tr>
<tr>
<td>MVS CONSOLE</td>
<td>MVS console to issue commands and view messages</td>
</tr>
<tr>
<td>DB2 CONSOLE</td>
<td>DB2 console to issue commands and view messages</td>
</tr>
</tbody>
</table>
Realtime Main Menu

**Application Trace**
Provides a way to trace applications executing within DB2 and view the resulting information.

**Distributed Data**
Displays DDF-related information, including DDF statistics, DDF VTAM session activity, and DDF VTAM conversation activity.

**Object Analysis**
Displays information that helps you evaluate DB2 objects.

**MVS Console**
Displays MVS messages and allows you to issue MVS commands.

**DB2 Console**
Displays DB2 and IRLM messages and allows you to issue DB2 commands.

**Miscellaneous**
Provides ways to view DB2 address spaces and to issue OMEGAMON II commands.

**Profile**
Provides navigation options to screens where you may alter or define all OMEGAMON II session options, such as PF key definitions or exception levels.

**Historical**
Displays near-term historical statistics trace information and information about online historical data collection.

**IFCID Trace**
Start an IFCID trace. See “IFCID Trace” on page 591 for details.

**Other DB2**
Directs OMEGAMON II to monitor a different DB2 system.

**Fields**
The Realtime Main Menu does not display any output fields. It displays navigation options to other screens that display information about DB2 functions.
Historical Main Menu

The Historical Main Menu enables you to generate historical reports and graphs, and to execute data management functions.

Highlighting

The Historical Main Menu does not contain any highlighted fields.

Navigation

To choose one of the selections on this menu, type the character corresponding to the selection on the command line and press Enter.

The following is a short description of the navigation options available from the Historical Main Menu:

- **O2 Report**: Provides access to OMEGAMON II historical reports.
- **Collect**: Sets or changes collection specifications.
- **Extract**: Sets or changes data extraction specifications.
- **Summarize**: Sets or changes data summarization specifications.
- **Dictionary**: Displays and optionally prints the online data dictionary.
- **Messages**: Displays and optionally prints OMEGAMON II messages.
- **ATF Report**: Provides access to application trace data stored in VSAM datasets.
- **Exit**: Returns to the OMEGAMON II Primary Options Menu.
Introduction

OMEGAMON II provides information about the DB2 system, the ability to issue console commands and view messages, and the ability to change the DB2 system that OMEGAMON II is monitoring through a series of four screens.

For more system-related information, see “Resource Managers and Other DB2 Subsystem Information” on page 179.

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MVS System Console and Message Traffic .......................... 41
DB2 System Console and Message Traffic .......................... 42
Redirect Monitoring to Another DB2 .............................. 43
Summary of DB2 Activity

The Summary of DB2 Activity screen gives an overview of current DB2 activity. This screen presents system wide activity and resource utilization information, along with connection activity summaries grouped by DB2 connection type: IMS, CICS™, TSO, batch, utilities, distributed, and stored procedures.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synch Read I/O Rate</td>
<td>RIO</td>
<td>The synchronous RIO rate is high.</td>
</tr>
<tr>
<td>Prefetch Req Rate</td>
<td>PREF</td>
<td>The asynchronous prefetch request rate is high. Includes sequential, dynamic, and list prefetch.</td>
</tr>
<tr>
<td>Current Lock Suspensions</td>
<td>SUSL</td>
<td>The total number of threads suspended waiting for locks is high.</td>
</tr>
<tr>
<td>Connections</td>
<td>IDFR</td>
<td>The total number of IDFORE connections is high.</td>
</tr>
<tr>
<td></td>
<td>IDBK</td>
<td>The total number of IDBACK connections is high.</td>
</tr>
<tr>
<td>Threads</td>
<td>TMAX</td>
<td>Number of active threads is high.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>CPU rate for threads in the connection type is high.</td>
</tr>
<tr>
<td>Getpage Rate</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Elapsed Time</td>
<td>ETIM</td>
<td>Elapsed time is high for active threads in the connection type.</td>
</tr>
<tr>
<td>Utilities</td>
<td>UTIS</td>
<td>One or more utilities were started but did not complete running due to abnormal termination.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about

- a connection type, move the cursor to the connection line and press the zoom key (PF11).  
- other topics, use the OMEGAMON II PF keys.
Fields

Here are descriptions for some of the fields displayed in the Summary of DB2 Activity screen for DB2 summary information and DB2 connection information.

DB2 Summary Information

Note: All rate information reported is computed by dividing the reported value by the elapsed time since the previous OMEGAMON II cycle. For example, OMEGAMON II computes the synchronous read I/O rate by dividing the number of synchronous read requests since the previous OMEGAMON II cycle by the elapsed time since the previous cycle.

SSAS+DBAS+IRLM+DIST CPU

The CPU rate (percent) used by these DB2 address spaces. It includes both TCB and SRB time. DB2 use of cross memory services causes the majority of DB2 CPU time to be attributed (by SRM) to the user’s address space. Therefore, the CPU value does not include DB2 CPU time attributed to the user’s address space as a result of cross memory services use. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

Thread Commit Rate

The number of commits per second.

Create Thread Rate

The number of create thread requests per second.

Thread Signon Rate

The number of thread signon requests per second. Thread signon processing is only applicable in the CICS and IMS DB2 attachment environments.

Synch Read I/O Rate

The number of synchronous read I/Os per second.

Prefetch Req Rate

The number of sequential and list prefetch requests per second.

Update Request Rate

The number of update requests per second. The update count is incremented each time a row in a page is updated. Updated pages are queued by the dataset until written. Updated pages are physically written using the DB2 deferred write algorithm.

Write I/O Rate

The number of write I/Os per second. Write I/O is normally performed asynchronously. Updated pages are queued by the dataset until written. Updated pages are physically written using the DB2 deferred write algorithm.

Getpages/Read I/O

The getpage to read I/O ratio. This value assists in measuring read and buffer pool efficiency. The value is computed by dividing the total number of getpage requests by the total number of synchronous read I/O requests since the last OMEGAMON II cycle.

Pages/Write I/O

The average number of pages written per write I/O. This value is computed by dividing the number of pages written by the number of write I/Os since the last OMEGAMON II cycle.

Current Lock Suspensions

The current number of threads that are waiting due to a lock request issued for a resource that is unavailable.
### Summary of DB2 Activity

**Locking Timeouts**  
The number of locking timeouts that have occurred since DB2 was started.  
Timeouts occur because lock requests were suspended for an amount of time in excess of the locking timeout value.

**Locking Deadlocks**  
The number of locking deadlocks that have occurred since DB2 was started.  
Deadlocks are a result of locking contention.

**Locking Escalations**  
The number of lock escalations that have occurred since DB2 was started.  
This count includes the number of escalations to both shared and exclusive modes.

---

**DB2 Connection Information**

The DB2 connection information follows:

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections</td>
<td>The number of active connections originating from the connection type. For Distributed, it is the count of remote DB2 connections in which the DB2 subsystem being monitored has active DB2-to-DB2 system conversations.</td>
</tr>
<tr>
<td>Threads</td>
<td>The number of active threads originating from the connection type. For Distributed, it is the number of active database access threads that are active on the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>CPU</td>
<td>The total CPU rate (percent) attributable to the connection type. For non-CICS connection types, this value is the total CPU rate of all address spaces within the connection type with active threads. For CICS connections, this value is the total CPU rate attributable to all active threads originating from CICS connections. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.</td>
</tr>
<tr>
<td>Getpage Rate</td>
<td>The total getpage rate per second for active threads originating from the connection type.</td>
</tr>
<tr>
<td>Elapsed Time</td>
<td>The average elapsed time for an active thread within the connection type. This value is computed by adding the elapsed time of all active threads within the connection type and dividing it by the total number of active threads.</td>
</tr>
</tbody>
</table>
MVS System Console and Message Traffic

The MVS System Console and Message Traffic screen allows you to issue MVS commands and display MVS console messages.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Because your site may want to restrict the ability to issue system commands, this screen requires special authorization. To issue MVS commands, first type `/PWD` on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, follow the instructions below to issue MVS commands. Here are descriptions for some of the fields displayed on this screen.

- **OCMD**: After you type an MVS command and press Enter, OMEGAMON II displays a message indicating whether the command was issued successfully. See the output of the MVS messages below CONS to see the results of the command you issued. For information about valid MVS commands, see the IBM MVS System Commands Reference Manual.

- **CONS**: Determines the ID of the console buffer to display.

- **line10**: Displays the last \( n \) lines of the output buffer for the MVS operator console. In this case, displays the last 10 lines of the buffer.
DB2 System Console and Message Traffic

The DB2 System Console and Message Traffic screen allows you to issue DB2 commands. This screen also displays DB2 subsystem and IRLM messages.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Because your site may want to restrict the ability to issue system commands, this screen requires special authorization. To issue DB2 commands, first type /PWD on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, follow the instructions below to issue DB2 commands. Here are descriptions for some of the fields displayed on this screen.

DCMD

After you type a DB2 command and press Enter, OMEGAMON II displays a message indicating whether the command was issued successfully. (Do not include the subsystem recognition character in the DB2 command. OMEGAMON II does this for you automatically.) For information about valid DB2 commands, see the IBM DB2 Command and Utility Reference Manual. After OMEGAMON II executes DCMD, it comments out the DCMD command to prevent accidental reexecution. To issue another DB2 command, replace the comment character (>) with a hyphen (-) and enter the command as described above.

DCNS10

Displays the last nn DB2 and IRLM messages. In this case, displays the last 10 messages.
Redirect Monitoring to Another DB2

Introduction

The Redirect Monitoring to Another DB2 screen allows you to change the DB2 system you are monitoring or redirect OMEGAMON II to a restarted DB2 system.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

Name

Name of the DB2 subsystem.

Command Prefix

The name of the DB2 command prefix. This field is displayed only for DB2 Version 4 and above.

Scope

The scope for the command prefix. This field is displayed only for DB2 Version 4 and above. Possible values are:

- S: Started. The prefix is registered at DB2 startup. This is the default.
- M: MVS system scope. The prefix is registered during MVS IPL.
- X: Sysplex scope. The prefix is registered during MVS IPL.

Group Attach

The group attachment name, used for data sharing. This field is blank if the DB2 subsystem is not defined as a member of a data sharing group. This field is displayed only for DB2 Version 4 and above.

Ver

The version of the DB2 subsystem is displayed if the DB2 subsystem is active.

STATUS

The following statuses may be displayed:

- Active: DB2 subsystem is active.
- Not Active: DB2 subsystem is not active.
- Init or Term: DB2 subsystem is either initializing or terminating.
Redirect Monitoring to Another DB2
Introduction

Exception analysis is one of the most powerful features of OMEGAMON II. OMEGAMON II continually monitors the system for problems related to threads, CICS, IMS, and system operation. It produces messages only when a condition goes above or below a user-specified threshold, or if an unexpected condition occurs. (When this occurs, an exception is said to have tripped.) Since each system is different, you will want to adjust the exception thresholds to reflect potential DB2 performance problems for your site. See “Profile Maintenance Facility” on page 405 to do this.

OMEGAMON II also provides online recommendations that can help you take appropriate action when an exception trips. To view the recommendation associated with a particular exception, move the cursor to the exception line and press PF10.

OMEGAMON II provides four screens that display information about exceptions. Each of these screens displays information for a specific exception group (CI, CICS; IM, IMS; SY, DB2 system; or TH, thread) or for all exceptions.

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- Current Status for Exceptions ............................................. 61
- Status for Tripped Exceptions ............................................. 62
- Reset Last and Worst Values ............................................. 63
Exception Messages

The Exception Messages screen provides information about the condition of the selected exception group: all, thread, CICS, IMS or (DB2) system. It also provides access to information about the status of the selected exception group.

If you select **A** for all exceptions, OMEGAMON II displays the exceptions for all of the groups (CICS, IMS, system, and thread) in alphabetical order by group. OMEGAMON II separates each group with a heading.

If you select **B** for thread exceptions, OMEGAMON II first identifies the thread to which the exceptions apply, and then displays all exceptions that have been tripped for that thread.

If you select **C** for CICS exceptions, OMEGAMON II provides information about exceptional conditions occurring within the CICS/DB2 attachment of CICS regions connected to DB2.

If you select **D** for IMS exceptions, OMEGAMON II provides information about exceptional conditions occurring within the IMS/DB2 attachment of IMS dependent and control regions connected to DB2.

If you select **E** for system exceptions, OMEGAMON II provides information about the current condition of DB2 system resources and functions, including DB2 connections and threads, buffer management, log management, and locking.

If you select **F** for status, OMEGAMON II displays a screen showing the current status of the exceptions last displayed on the Exception Messages screen. (See “Current Status for Exceptions” on page 61.)

**Highlighting**

OMEGAMON II does not highlight any fields on the Exception Messages screen.

**Navigation**

For additional information about

- an exception, move the cursor to the exception line and press the zoom key (PF11).
- exception recommendations, move the cursor to the exception line and press PF10.
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Fields

Each of the exceptions that OMEGAMON II displays on the Exception Messages screen has the following default display characteristics:

- Bell=OFF
- Boxchar=NO BOX
- Boxclr=NONE
- Boxattr=NONE
- Display=CLR3
- Attribute=NONE
- EnNcyc=0
- Stop=0
- Cumulative=0
- Auto=OFF
- Log=OFF
- Limit=200
- Repeat=YES
- Persist=1

To change a characteristic of any exception, see “Profile Maintenance Facility” on page 405.

A description of each possible exception (for all selections, arranged in alphabetical order) follows:

**ARCM**  
Thread backout processing is waiting for an archive tape mount.  
OMEGAMON II displays the ARCM exception when a thread is waiting for a tape mount.  DB2 requires the archive tape mount during abort processing to backout changes made in the current unit of recovery.  The thread does not do any processing until the tape is mounted, and holds DB2 resources until the abort request is complete.

ARCM is a member of the thread (TH) exception group.  This exception monitors an action, not a value; its threshold is always N/A.  The default state for ARCM is ON.  If State is ON and a DB2 thread is waiting for a tape mount of an archive log, OMEGAMON II displays the exception.

**ARCV**  
A DB2 recovery log archive is currently waiting for a tape mount.  
A tape mount is necessary if DB2 recovery log archiving is to tape.  Log dataset archiving is an automatic feature of the DB2 log manager.  Log archiving is initiated internally by DB2 when an active log is full.  It runs as a subtask within the DB2 subsystem, and as a result, no job or started task is initiated.

ARCV is a member of the DB2 system (SY) exception group.  This exception monitors an action, not a value; its threshold is always N/A.  The default state for ARCV is ON.  If State is ON and an archive is waiting for a tape mount, OMEGAMON II displays the exception.
BMTH Warns that a particular buffer pool has exceeded a user-specified percentage of its capacity. This exception can also warn that use of the buffer pool has reached one of three DB2 buffer manager thresholds: SPTH, DMTH, or IWTH.

When the buffer pool used percentage is below 90% (that is, 89% or less), you will get the basic exception message, assuming that you have set the threshold at 90% or lower. This message simply reports the percentage of use for any buffer pool that has reached the threshold value.

When the buffer pool used percentage is between 90% and 94.9%, inclusive, the exception message will include the information that the buffer pool has reached the sequential prefetch threshold (SPTH).

When the buffer pool used percentage is between 95% and 97.5%, inclusive, the exception message will include the information that the buffer pool has reached the data manager threshold (DMTH).

When the buffer pool used percentage exceeds 97.5%, the exception message will include the information that the buffer pool has reached the immediate write threshold (IWTH).

BMTH is a member of the system (SY) exception group. The default threshold is 90%.

**Note:** *In order to be notified when each of the buffer manager thresholds is reached, you must set the BMTH threshold to 90% or less.*

CICT Provides thread use information for an individual CICS region.

CICT is a member of the CICS (CI) exception group. The default threshold for CICT is 80% of the THRDMAX value in the Resource Control Table (RCT). The threshold can be any value between 1% and 100%. If the ratio of active CICS threads to the THRDMAX value exceeds the threshold, OMEGAMON II displays the exception.

COMT Ratio of updates to commits is greater than nnn:n.

OMEGAMON II displays the COMT exception when the number of system page updates per commit exceeds the installation-defined threshold.

The update count used in the rate calculation is incremented each time a row in a page is updated.

COMT is a member of the thread (TH) exception group. Default threshold for COMT is 100 page updates to 1 commit. The threshold can be any value between 1 and 10,000. If the ratio of updates to commits exceeds the threshold, OMEGAMON II displays the exception.

CTHD Application is waiting for thread creation.

This is caused when the system maximum thread limit is reached (CTHREAD parameter). CTHD is a member of the thread (TH) exception group. This exception monitors an action, not a value; its threshold is always N/A. If State is ON and a user is waiting for thread creation, OMEGAMON II displays the exception.
**Exception Analysis**

**DDFS**
Reports when DDF is not active.

OMEGAMON II displays the DDFS exception when it detects that the Distributed Database Facility (DDF) is not active in the DB2 subsystem being monitored. This might be due to the fact that DSNZPARM specifies that DDF must be started manually; it might also reflect an abnormal termination of the distributed database facility.

DDFS is a member of the system (SY) exception group. This exception monitors an action, not a value; its threshold is always N/A.

**DRCV**
Monitors the VTAM APPC receive rate.

OMEGAMON II displays the DRCV exception when the DDF VTAM receive data rate exceeds the exception threshold.

DRCV is a member of the system (SY) exception group. The exception threshold rate is expressed as kilobytes per second. The default threshold for DRCV is 1000 kilobytes/second.

**DSND**
Monitors the VTAM APPC send rate.

OMEGAMON II displays the DSND exception when the DDF VTAM APPC send data rate exceeds the exception threshold.

DSND is a member of the system (SY) exception group. The exception threshold rate is expressed as kilobytes per second. The default threshold for DSND is 1000 kilobytes/second.

**DWAT**
Monitors the time a distributed allied thread has been waiting for a response to a remote SQL request.

OMEGAMON II displays the DWAT exception when it detects that a distributed allied thread has been waiting for a response to a remote SQL request for a period of time greater than the exception threshold.

DWAT is a member of the thread (TH) exception group. The exception threshold is expressed as an integer, that is, the number of seconds that can elapse before the exception will trip. The default threshold for DWAT is 120 seconds.

**EDMU**
Provides information about EDM pool utilization.

DB2 uses the environmental descriptor management (EDM) pool to manage and contain database descriptors (DBDs), cursor tables (CTs), skeleton cursor tables (SKCTs), package tables (PTs), skeleton package tables (SKPTs), and dynamic SQL caches (DSCs). The size of the pool is defined by an installation parameter.

To compute the EDM-in-use ratio, OMEGAMON II totals the EDM pages in use by package tables, cursor tables, and database descriptors and divides this number by the total EDM pool size. This value does not include SKCTs, SKPTs, or DSCs.

EDMU is a member of the DB2 system (SY) exception group. The default threshold for EDMU is 90% of the pool size. The threshold can be any value between 1% and 100%. If the ratio of pool in use to total pool size exceeds the threshold, OMEGAMON II displays the exception.
### ENTO

Provides information about POOL thread use originating from CICS transactions that were diverted to the pool because all ENTRY threads for the requested DB2 plan are in use.

ENTO does not analyze ENTRY definitions with a THRDA value of zero because these threads automatically use the buffer pool and are considered legitimate POOL thread users.

ENTO analyzes all ENTRY thread definitions with TWAIT=POOL and THRDA>0 specified. As a result, it can trip and display multiple times on one OMEGAMON II cycle for the same CICS region. The Plan=cccccccc displays the DB2 plan name assigned to the entry thread(s). If the DB2 plan name is ********, then the entry definition is using the CICS dynamic plan exit. The variable aaaa is the first CICS transaction defined to the plan. The CICS transaction ID is needed because the same DB2 plan can be defined to multiple ENTRY definitions. A CICS transaction can only be defined to a single DB2 plan. Therefore, the transaction ID in the exception output provides a unique identifier of which ENTRY definition is overflowing if the DB2 plan is defined to multiple ENTRY definitions.

ENTO is a member of the CICS (CI) exception group. The default threshold for ENTO is three transactions. The threshold can be any value between 1 and 100 transactions. If the number of transactions using a POOL thread due to an overflow exceeds the threshold, OMEGAMON II displays the exception.

### ENTU

Provides information about CICS ENTRY thread use.

The definition of ENTRY threads (in the RCT) is optional. The definition and use of ENTRY threads enables the DB2 user to assign one or more DB2 threads to a single DB2 plan. It also allows definition of one or more transactions that may use the plan.

ENTU analyzes all ENTRY thread definitions. As a result, it can trip and display multiple times on one OMEGAMON II cycle for the same CICS region. The Plan=cccccccc is the DB2 plan name assigned to the entry thread(s). If the DB2 plan name is ********, then the entry definition is using the CICS dynamic plan exit. The variable aaaa is the first CICS transaction defined to the plan. The CICS transaction ID is needed because the same DB2 plan can be defined to multiple ENTRY definitions. A CICS transaction can only be defined to a single DB2 plan. The transaction ID in the exception output provides a unique identifier of which ENTRY definition is incurring the thread use reported by the exception.

ENTU ignores all ENTRY definitions with a THRDA value of zero and TWAIT=POOL. It also ignores any ENTRY definitions in which THRDA is set to one, regardless of the TWAIT operand in use.

ENTU is a member of the CICS (CI) exception group. The default threshold for ENTU is 95% of the THRDA value. The threshold can be any value between 1% and 100%. If the ratio of active threads originating from an ENTRY definition to the ENTRY definition's THRDA value exceeds the threshold, OMEGAMON II displays the exception.
**ENTW**

Provides information about CICS transactions waiting for ENTRY threads.

The definition of ENTRY threads (in the RCT) is optional. By using ENTRY threads, you can assign one or more DB2 threads to a single DB2 plan. It also allows definition of one or more transactions which may use the plan. Other options are available when defining ENTRY threads, one of which is TWAIT. TWAIT is used to govern the desired processing when all DB2 threads associated with an ENTRY definition (plan) are in use. If TWAIT is YES is specified and no ENTRY thread is available, the request is queued and waits for a thread assigned to the ENTRY definition to become available. This exception is tripped and displayed when the number of transactions waiting for an ENTRY thread exceeds the exception threshold.

The exception routine analyzes all ENTRY thread definitions with TWAIT is YES specified. As a result, the exception can trip and display multiple times on one OMEGAMON II cycle for the same CICS region. The Plan=cccccccc is the DB2 plan name assigned to the ENTRY thread(s). The variable aaaa is the first CICS transaction ID needed because the same DB2 plan can be defined to multiple ENTRY definitions. A CICS transaction can only be defined to a single DB2 plan. The transaction ID in the exception output provides a unique identifier of which ENTRY definition is incurring the waits if the DB2 plan is defined to multiple ENTRY definitions.

ENTW is a member of the CICS (CI) exception group. The default threshold for ENTW is two transactions. The threshold can be any value between 1 and 100 transactions. If the number of transactions waiting for an ENTRY thread exceeds the threshold, OMEGAMON II displays the exception.

**ETIM**

Monitors the elapsed time for a DB2 thread (from signon or create thread).

ETIM displays the wall clock time that the plan has been actively holding thread resources. This may indicate that service level commitments have been exceeded.

ETIM is a member of the thread (TH) exception group. The default threshold for ETIM is 600 seconds. The threshold can be any value between 1 and 999999.99 seconds. If the thread elapsed time exceeds the threshold, OMEGAMON II displays the exception.

**GETP**

Provides information about getpage requests per read I/O.

The counters which DB2 maintains for this activity are updated throughout the life of the thread, and are reset when DB2 signon occurs.

GETP is a member of the thread (TH) exception group. The default threshold for GETP is 15 (1.5 getpages to read I/Os). The threshold can be any value between 0 and 100. Specify the threshold as an integer, where 1 equals 0.1 getpages to read I/Os. For example, OMEGAMON II sets a threshold specified as 20 equal to a ratio of 2.0 getpages to read I/Os. If the ratio of the getpage rate to read I/Os falls below the threshold, OMEGAMON II displays the exception.

**GTRC**

Indicates that the DB2 global trace is currently active.

GTRC is a member of the DB2 system (SY) exception group. This exception monitors an action, not a value; its threshold is always N/A. If State is ON and the global trace is active, OMEGAMON II displays the exception.
IDBC Provides information about the amount of CPU time used by DB2 to process this thread.

IDBC is a member of the thread (TH) exception group. The default threshold for IDBC is .7 seconds. The threshold can be any value between 0.00 and 999999.99 seconds. The threshold is specified in 100ths of seconds. For example, to set a threshold of .7, specify a value of 70. If the total In-DB2 CPU time exceeds the threshold value, OMEGAMON II displays the exception.

IDBK Provides information about how close DB2 is to the maximum background connections allowed.

IDBK is a member of the DB2 system (SY) exception group. The default threshold for IDBK is 90% of the IDBACK installation parameter. The threshold can be any value between 1% and 100%. If the ratio of active background connections to the IDBACK value in use exceeds the threshold value, OMEGAMON II displays the exception.

IDBT Provides information about the length of time DB2 has been processing this thread.

IDBT is a member of the thread (TH) exception group. The default threshold for IDBT is 5 seconds. The threshold can be any value between 1 and 999999.99 seconds. If the total In-DB2 time exceeds the threshold value, OMEGAMON II displays the exception.

IDFR Provides information about how close DB2 is to the maximum foreground connections allowed.

IDFR is a member of the DB2 system (SY) exception group. The default threshold for IDFR is 85% of the IDFORE installation parameter. The threshold can be any value between 1% and 100%. If the ratio of active foreground connections to the IDFORE value in use exceeds the threshold value, OMEGAMON II displays the exception.

IMCN Warns when an IMS region is defined to DB2, but the connection failed.

IMCN is a member of the IMS (IM) exception group. This exception monitors an action, not a value; its threshold is always N/A. If State is ON and a region is defined but not connected to DB2, OMEGAMON II displays the exception.

IMND Warns when no IMS dependent region is defined to DB2.

IMND is a member of the IMS (IM) exception group. This exception monitors an action, not a value; its threshold is always N/A. If State=ON and no dependent region is defined to DB2, OMEGAMON II displays the exception.

INDB Provides information about individual threads that are in indoubt status.

These threads may cause DB2 resources to be unavailable to other active threads until either restart or RECOVER INDOUBT processing occurs.

INDB is a member of the thread (TH) exception group. This exception monitors an action, not a value; its threshold is always N/A. If State=ON and a thread is in doubt, OMEGAMON II displays the exception.

INDT Provides information about the number of indoubt threads in the DB2 system.

INDT is a member of the DB2 system (SY) exception group. The default threshold for INDT is one indoubt thread. The threshold is a value between 1 and 100 threads. If the number of indoubt threads exceeds the threshold value, OMEGAMON II displays the exception.
LKUS

Provides information about the number of locks owned by an individual thread. If the thread reaches 100% of NUMLKUS, DB2 terminates the thread. LKUS is a member of the thread (TH) exception group. The default threshold for LKUS is 80% of the NUMLKUS parameter defined by the installation. The threshold can be any value between 1% and 100%. If an active thread exceeds the threshold, OMEGAMON II displays the exception.

LOGN

Provides information about the availability of primary active logs. Active log datasets are allocated to DB2 during start-up processing. When an active log dataset is full, it is automatically archived by DB2 to an archive log. When an active log is successfully archived, it is available for reuse. The availability of active logs is critical to the functioning of DB2. If no active log is available, the DB2 subsystem will hang until one becomes available. The lack of an active log could be caused by an insufficient number of logs defined at installation time, too small a log dataset size, or possibly due to problems encountered during the archive process. LOGN is a member of the DB2 system (SY) exception group. The default threshold for LOGN is two available logs. The threshold is a value between 1 and 100 logs. If the number of available primary active logs is less than or equal to the threshold value, OMEGAMON II displays the exception.

MCNV

Monitors the percentage of the maximum allowed conversations for each logmode and the number of threads that are waiting (if any). OMEGAMON II displays the MCNV exception when the number of conversations in use constitutes a specified percentage of the preset maximum for a given logmode. In addition, when the percentage reaches 100%, the exception displays the number of threads waiting because the preset maximum was exceeded. MCNV is a member of the system (SY) exception group. The exception threshold is expressed as a percentage (0-100). For example, if you want OMEGAMON II to notify you when any logmode has started 80% of its allotment of conversations, then set the threshold to 80. The default threshold for MCNV is 80%.

MDBT

Monitors the percentage of maximum allowed database access threads that are in use. OMEGAMON II displays the MDBT exception when the number of distributed database access threads in use constitutes a specified percentage of the preset maximum. The maximum is set in DSNZPARM by the MAXDBAT parameter. MDBT is a member of the system (SY) exception group. The exception threshold is expressed as a percentage (0-100). For example, if you want OMEGAMON II to notify you when an application has used 80% of its allotment of database access threads, set the threshold to 80. The default threshold for MDBT is 85%.

MDBW

Monitors the number of database access threads that are waiting because MAXDBAT was reached. OMEGAMON II displays the MDBW exception when the number of distributed database access threads waiting because the maximum has been reached exceeds the exception threshold. The maximum is set in DSNZPARM by the MAXDBAT parameter. MDBW is a member of the system (SY) exception group. The exception threshold is expressed as an integer, that is, the number of threads waiting because MAXDBAT was reached. The default threshold for MDBW is 2.
Exception Messages

MSGE Displays DB2 and IRLM messages that were generated since the last OMEGAMON II cycle.

OMEGAMON II displays the DB2 and IRLM messages that have been written to the system log since the last OMEGAMON II cycle, or as many of the messages as the LROWS parameter for the terminal allows, whichever is less. In order to control which DB2 and IRLM messages the MSGE exception displays, see “Set DB2/IRLM Messages that MSGE Exception Monitors” on page 439.

MSGE is a member of the DB2 system (SY) exception group. The default threshold for MSGE is N/A. If State is ON and new messages exist, OMEGAMON II displays the messages.

PGUP Monitors the number of page update requests per second made by a thread.

The update count reflected in this exception is incremented each time a row in a page is updated. Updated pages are not necessarily written at commit, but rather, asynchronously as determined by the DB2 deferred write algorithm. There is no direct, immediate relationship, therefore, between page updates and page writes.

The counters which DB2 maintains for this activity are updated throughout the life of the thread, and are reset at DB2 signon if the thread is reused.

PGUP is a member of the thread (TH) exception group. The default threshold for PGUP is 10 updates per second. The threshold can be any value between 1 and 1000 updates per second. If the active thread exceeds the threshold, OMEGAMON II displays the exception.

POLU Provides information about POOL threads in use.

POLU is a member of the CICS (CI) exception group. The default threshold for POLU is 90% of the total number of POOL threads allowed. The threshold can be any value between 1% and 100%. If the percentage of POOL threads exceeds the threshold, OMEGAMON II displays the exception.

POLW Provides information about CICS transactions waiting for a POOL thread.

POLW is a member of the CICS (CI) exception group. The default threshold for POLW is two transactions. The threshold can be any value between 1 and 99 transactions. If the number of transactions waiting for a POOL thread exceeds the threshold, OMEGAMON II displays the exception.

PREF Provides information about read sequential prefetch activity.

Unlike normal read I/O, sequential prefetch read I/O is performed asynchronously with the user’s request. It provides a read-ahead capability. A single sequential prefetch I/O results in multiple pages being read. Threads with excessive sequential prefetch rates may cause a negative impact on overall DB2 performance.

The counters which DB2 maintains for this activity are updated throughout the life of the thread, and are reset during DB2 signon if the thread is reused.

PREF is a member of the thread (TH) exception group. The default threshold for PREF is 10 prefetch requests per second. The threshold can be any value between 1 and 100 sequential prefetch requests per second. If the prefetch rate exceeds the threshold, OMEGAMON II displays the exception.
RCPU  Monitors the amount of CPU time being used by a distributed database access thread at the remote DB2 location.

OMEGAMON II displays the RCPU exception when the amount of CPU time used by a database access thread at a remote DB2 location is greater than the exception threshold.

RCPU is a member of the thread (TH) exception group. The exception threshold is an integer that represents tenths of seconds. For example, the default threshold of 30 means that the exception will trip each time a database access thread uses more than 3 seconds of CPU time.

RELM  Provides information about the resource limit facility.

This exception analyzes the ratio of the resource limit high water mark (CPU seconds) to the current resource limit.

RELM is a member of the thread (TH) exception group. The default threshold for RELM is 85 percent of the resource high water mark (CPU seconds). The threshold can be any value between 1 and 100 percent of the resource limit. If the resource limit exceeds the threshold, OMEGAMON II displays the exception.

RIO  Provides information about the thread synchronous read I/Os rate.

Generally, this exception indicates excessive physical read I/O on behalf of a thread. While a single SELECT may return a limited number of rows, the pages searched may be enormous. I/O may be caused by access path selection changes which occurred due to object changes (indexes dropped or no longer clustered), or by inadvertent use of stage 2 (non-sargable) predicates. It might simply result from the fact that the SQL is a set-oriented language, which operates on sets of data, rather than on individual rows (records).

The counters which DB2 maintains for this activity are updated throughout the life of the thread, and are reset during DB2 signon if the thread is reused.

RIO is a member of the thread (TH) exception group. The default threshold for RIO is 10 read requests per second. The threshold can be any value between 1 and 1000 synchronous read requests per second. If the read I/O rate per second exceeds the threshold, OMEGAMON II displays the exception.

SPAC  Indicates that the number of ASIDs executing stored procedures exceeds the threshold. The threshold is expressed as a count of address spaces capable of executing stored procedures. It can be an integer from 0 to 99. Stored procedures can be executed in any WLM-managed stored procedure address space. SPAC is a member of the DB2 system (SY) group. The default threshold is 3 and the default state is On.

STPE  Indicates that the number of stored procedures executing exceeds the threshold. The threshold is expressed as a count of stored procedures currently executing. It can be an integer from 0 to 99. STPE is a member of the DB2 system (SY) group. The default threshold is 10 and the default state is On.

SUSL  Detects the number of threads that are unable to continue execution and are suspended due to a locking conflict.

SUSL is a member of the DB2 system (SY) exception group. The default threshold for SUSL is five suspended threads. The threshold can be any value between 1 and 100 suspended threads. If the number of lock suspensions exceeds the threshold value, OMEGAMON II displays the exception.
Exception Messages

TCPU Monitors the CPU rate (percent) of active threads.
For non-CICS threads, this is the CPU rate of the address space from which the thread originates. It includes both TCB and SRB time. For CICS threads, this is the CPU rate attributable to the thread originating from the CICS connection. It includes only TCB time incurred by the thread.

This exception limits its analysis of CPU use to DB2 connections that contain active threads. This exception does not report CPU use for connections with no active threads.

TCPU is a member of the thread (TH) exception group. The default threshold for TCPU is 20% of total processor utilization. The threshold can be any value between 1% and 100%. If CPU utilization exceeds the threshold value, OMEGAMON II displays the exception.

THDQ Detects users waiting for thread creation to occur.
OMEGAMON II displays this exception when the number of users queued and waiting for create-thread processing exceeds the exception threshold.

This exception may indicate that DB2 reached the CTHREAD value that controls the number of active threads.

THDQ is a member of the DB2 system (SY) exception group. The default threshold for THDQ is 2. The threshold is a value between 1 and 100 requests. If the number of requests queued and waiting for create thread processing exceeds the threshold, OMEGAMON II displays the exception.

TMAX Indicates when the number of active threads is approaching the maximum number allowed.
DB2 thread concurrency can be controlled by the CTHREAD value. CTHREAD defines the maximum number of concurrent threads allowed.

TMAX is a member of the DB2 system (SY) exception group. The default threshold for TMAX is 85% of the CTHREAD installation parameter. The threshold can be any value between 1 and 100%. If the ratio of active threads to the CTHREAD parameter exceeds the threshold, OMEGAMON II displays the exception.

TRCV Monitors the amount of data received by distributed threads from a remote DB2 subsystem.
OMEGAMON II displays the TRCV exception when it detects that a distributed thread has received an amount of data greater than the exception threshold.

TRCV is a member of the thread (TH) exception group. The exception threshold is expressed in kilobytes. The default threshold for TRCV is 1000 kilobytes.

TRGD Indicates that the depth of the largest trigger stack exceeds the threshold. The threshold is expressed as the number of triggers in the largest trigger stack. It can be an integer from 0 to 99. TRGD is a member of the DB2 system (SY) group. The default is 1 and the default state is On.

TRGE Indicate that the number of triggers executing exceeds the threshold. The threshold is expressed as a count of triggers currently executing. It can be an integer from 0 to 99. TRGE is a member of the DB2 system (SY) group. The default threshold is 10 and the default state is On.
The next group of exceptions (VDIO, VEDR, VSRV, VTIO, and VUTL) share the following characteristics:

- They are in effect only when the object analysis collector is active.
- The collector will collect data from volumes that contain DB2 datasets that are currently MVS-allocated to the DB2 subsystem you are monitoring.
- All rates and ratios used in setting the exception thresholds are calculated using the object analysis collection interval elapsed time.

For example, the total volume I/O rate is calculated by dividing the number of volume I/Os that occurred during the current collection interval by the amount of time that has elapsed during the collection interval.
They are tripped only if there is I/O within the current collection interval from the DB2 being monitored.

**VDIO**  Monitors volume DB2 I/O rate activity.

This exception warns you when a volume’s DB2 I/O rate per second has reached a user-specified threshold. The threshold is expressed as the number of DB2 I/Os per second. It must be an integer between 0 and 9999.

VDIO is a member of the DB2 system (SY) exception group. The default threshold is 50, and the default state is ON.

**VEDR**  Monitors volume dataset extend activity.

This exception warns you when the dataset-to-dataset extent ratio of a volume reaches the user-specified threshold. The threshold is expressed as a ratio that represents the number of DB2 extents on the volume divided by the number of DB2 datasets. It must be an integer between 0 and 123.

VEDR is a member of the DB2 system (SY) exception group. The default threshold is 5, and the default state is ON.

**VSRV**  Monitors volume service time.

This exception warns you when a volume’s service time has reached a user-specified threshold. The threshold is expressed in milliseconds, and it must be an integer between 0 and 9999.

VSRV is a member of the DB2 system (SY) exception group. The default threshold is 30, and the default state is ON.

**VTIO**  Monitors volume total I/O rate activity.

This exception warns you when a volume’s total I/O rate per second has reached a user-specified threshold. The threshold is expressed as the total number of I/Os per second. It must be an integer between 0 and 9999.

VTIO is a member of the DB2 system (SY) exception group. The default threshold is 50, and the default state is ON.

**VUTL**  Monitors volume utilization.

This exception warns you when a volume’s utilization percentage has reached a user-specified threshold. The threshold is expressed as a percentage, and it must be an integer between 0 and 100.

VUTL is a member of the DB2 system (SY) exception group. The default threshold is 30, and the default state is ON.

**WCLM**  Indicates when a thread has been waiting for more than the specified length of time for a resource to be drained of claimers.

WCLM is a member of the thread (TH) exception group. The default threshold for WCLM is 60 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.
WDLK  Indicates when a thread has been waiting for more than the specified length of time to acquire a drain lock.

WDLK is a member of the thread (TH) exception group. The default threshold for WDLK is 60 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.

WGLK  Wait for global lock time.

Indicates when a thread has been waiting for more than the specified length of time to acquire a global lock in a data sharing environment.

WGLK is a member of the thread (TH) exception group. The default threshold for WGLK is 60 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.

WLGQ  Indicates when a thread has been waiting for more than the specified length of time for an ARCHIVE LOG MODE (QUIESCE) command to complete.

WLGQ is a member of the thread (TH) exception group. The default threshold for WLGQ is 60 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.

WSPS  Stored procedure wait time.

Indicates when a thread has been waiting for more than the specified length of time for the stored procedures address space to become available in order for a stored procedure to be scheduled.

WSPS is a member of the thread (TH) exception group. The default threshold for WSPS is 100 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.

Note:  For Version 6 and below of DB2, stored procedure wait time is reported under class 3 time.

Note:  For Version 7 of DB2, after IBM APAR PQ69983 is applied, stored procedure wait time is reported under class 1 time.

Note:  For Version 8 of DB2, stored procedure wait time is reported under class 1 time.
**WSRV**
Indicates when a thread has been waiting for more than the specified length of time for a DB2 service. DB2 service waits include:

- Open/close dataset
- SYSLGRNG update
- DFHSM recall
- Dataspace Manager services
- Define/Delete/Extend dataset

WSRV is a member of the thread (TH) exception group. The default threshold for WSRV is 30 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.

**WTRE**
Indicates when a thread has been waiting for more than the specified length of time. This exception waits for 1 IRLM deadlock cycle before tripping.

WTRE is a member of the thread (TH) exception group. The default threshold for WTRE is 100 seconds. The threshold can be any value between 0 and 999999.99 seconds. If the length of time the thread is waiting exceeds the threshold, OMEGAMON II displays the exception.
The Current Status for Exceptions screen provides information about the current characteristics of the selected OMEGAMON II exceptions, their last and worst values, and the time when those values occurred.

**Highlighting**

OMEGAMON II does not highlight any fields on the Current Status for Exceptions screen.

**Navigation**

For additional information about
- exception recommendations, move the cursor to the exception line and press PF10.
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen:

- **ARCM** — The name of the exception. (In this case, ARCM.)
- **Threshold** — The current threshold value set for this exception.
- **Trip Value** — The value that caused this exception to trip.
- **Time Occurred** — The date and time the exception last exceeded its threshold.
- **Total Trips** — The number of times this exception exceeded its threshold during the current session.
- **Trips Since Reset** — The number of times this exception exceeded its threshold since the last and worst values were reset.
- **State** — The current state of the exception. OMEGAMON II is currently monitoring this exception (ON), not monitoring this exception (OFF), or testing this exception (TEST).
- **Last** — The value of the exception the last time it exceeded its threshold.
- **Worst** — The worst value the exception has reached during the current OMEGAMON II session.
- **Group** — The two-character group to which this exception belongs (CI, CICS; IM, IMS; SY, DB2 system; or TH, thread).

To change a characteristic of any exception on this screen, see “Profile Maintenance Facility” on page 405.
Status for Tripped Exceptions

The Status for Tripped Exceptions screen displays the status of the selected OMEGAMON II exceptions that have tripped and the time when those values occurred.

Highlighting

OMEGAMON II does not highlight any fields on the Status for Tripped Exceptions screen.

Navigation

For additional information about
- exception recommendations, move the cursor to the exception line and press PF10.
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMT</td>
<td>The name of the exception. (In this case, COMT.)</td>
</tr>
<tr>
<td>Threshold</td>
<td>The current threshold value set for this exception.</td>
</tr>
<tr>
<td>Trip Value</td>
<td>The value that caused the exception to trip.</td>
</tr>
<tr>
<td>Time Occurred</td>
<td>The date and time the exception last exceeded its threshold.</td>
</tr>
<tr>
<td>Total Trips</td>
<td>The number of times this exception exceeded its threshold during the current session.</td>
</tr>
<tr>
<td>Trips Since Reset</td>
<td>The number of times this exception exceeded its threshold since the last and worst values were reset.</td>
</tr>
<tr>
<td>State</td>
<td>The current state of the exception. OMEGAMON II is currently monitoring this exception (ON), not monitoring this exception (OFF), or testing this exception (TEST).</td>
</tr>
<tr>
<td>Last</td>
<td>The value of the exception the last time it exceeded its threshold.</td>
</tr>
<tr>
<td>Worst</td>
<td>The worst value the exception has reached during the current OMEGAMON II session.</td>
</tr>
<tr>
<td>Group</td>
<td>The two-character group to which this exception belongs (CI, CICS; IM, IMS; SY, DB2 system; or TH, thread).</td>
</tr>
</tbody>
</table>

To change a characteristic of any exception on this screen, see “Profile Maintenance Facility” on page 405.
Reset Last and Worst Values

The Reset Last and Worst Values screen resets the values displayed by the Current Tripped Exceptions screen for the exception group specified below the title line (all, thread, CICS, IMS, or system). In particular, the last and worst values and the time that they occurred are reset for each tripped exception.

Highlighting

OMEGAMON II does not highlight any fields on the Reset Last and Worst Values screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

After you remove the comment character, the Reset Last and Worst Values screen displays the message:

Last, Worst, and Trip Counter Values Are Reset

This lets you know that OMEGAMON II has reset the last and worst values for all tripped exceptions.
Introduction

OMEGAMON II provides information about threads connected to DB2 through a series of screens.

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All Threads Connected to DB2

The All Threads Connected to DB2 screen is an overview of the activity of all threads connected to DB2. Each row provides information about an individual thread. Each column gives information about thread elapsed time, DB2 and MVS resource consumption, and DB2 activity.

**Highlighting**

OMEGAMON II highlights some fields on this screen to advise you that an exception related to this field exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>The thread address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for system page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The ratio of commits to updates indicates a low commit frequency.</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about
- a particular thread, move the cursor to the thread information line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Fields

Here are descriptions for some of the fields displayed on this screen.

**Elapsed**

The elapsed time since thread creation, or since DB2 signon if the thread is reused. When the elapsed time of the thread exceeds 24 hours, the format is **DD-HH:MM**.

**Parallel Processing Identifiers**

For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.

* Indicates the thread is a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

X Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

**Planname or Package**

The DB2 plan name (or package name) of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

**CPU**

The CPU rate (percent) associated with the thread.

For non-CICS threads, this is the CPU rate of the address space from which the thread originates. For CICS threads, this is the CPU rate attributable to the thread originating from the CICS connection. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

**Status**

The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

**GetPg**

The number of thread getpage requests. Getpage requests are logical read requests that may not actually result in physical I/O if the page requested is currently in the buffer pool.

DB2 resets the getpage count at create thread and signon. If signon is not driven, the getpage count is cumulative.

**Update**

The number of DB2 page updates made by the thread.

This value is incremented each time a row in a page is updated, not just once for each page updated. Page writes are scheduled asynchronously according to DB2's deferred write algorithm, not immediately after update or commit. Note that DB2 may update pages when it creates intermediate result tables because of a qualified SELECT statement.

DB2 resets the system page update count at create thread and signon. If signon is not driven, the page update count is cumulative.
Commit

The number of times the thread successfully completed commit processing.

DB2 resets the commit count at create thread and signon. If signon is not driven, the count is cumulative.

Jobname

The name of the active job.
TSO Thread Summary

The TSO Thread Summary screen is an overview of the activity of all foreground TSO threads connected to DB2. Each row provides information about an individual thread, including information about thread response time, DB2 and MVS resource consumption, and DB2 activity.

**Highlighting**

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>The thread address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for system page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The number of updates since the last successful commit is high.</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about

- a particular thread, move the cursor to the thread information line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Fields

The elapsed time since thread creation, or since DB2 signon if the thread is reused. When the thread’s elapsed time exceeds 24 hours, the format is DD-HH:MM.

Parallel Processing Identifiers

For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.

* Indicates the thread is a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

X Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

Plannname or Package

The DB2 plan name (or package name) of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

CPU

The current CPU rate (percent) of the TSO address space from which the thread originates. This includes both TCB and SRB time. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

Status

The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

GetPg

The number of thread getpage requests. This logical read request may not actually result in physical I/O if the page requested is currently in the buffer pool.

Update

The number of page updates made by the thread. This value is incremented each time a row in a page is updated, rather than only once for each page updated. Note that pages may be updated when intermediate result tables are created as a result of a qualified SELECT statement. Note also that page writes are scheduled asynchronously according to DB2’s deferred write algorithm, not immediately after update or commit.
### Commit

The number of times the thread successfully completed commit processing.

If a QMF™ thread user exits from a query panel to other than the home panel, tablespace locks defined with DEALLOCATE(COMMIT) will be retained until commit is effected. This is also true of SPUFI users who do not specify AUTOCOMMIT, or who specify DEFER on completion of a transaction.

### Userid

The TSO user ID of the active thread user.
CICS Thread Summary

The CICS Thread Summary screen provides an overview of DB2 thread activity originating from connected CICS subsystems. It provides information on a connection level about all CICS regions identified to DB2. It also presents information about individual CICS threads (such as thread elapsed time and DB2 activity) which are active in DB2.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobname</td>
<td>ENTO</td>
<td>The number of transactions defined as ENTRY threads, overflowed, and waiting for POOL threads is high.</td>
</tr>
<tr>
<td></td>
<td>ENTU</td>
<td>The percentage of available ENTRY threads is low.</td>
</tr>
<tr>
<td></td>
<td>ENTW</td>
<td>The number of transactions waiting for ENTRY threads is high.</td>
</tr>
<tr>
<td></td>
<td>POLU</td>
<td>The percentage of available POOL threads is low.</td>
</tr>
<tr>
<td></td>
<td>POLW</td>
<td>The number of transactions waiting for POOL threads is high.</td>
</tr>
<tr>
<td>Total CPU</td>
<td>TCPU</td>
<td>The address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>DB2 CPU</td>
<td>TCPU</td>
<td>The address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>Pct. of THRDMAX</td>
<td>CICT</td>
<td>The number of threads active has reached the threshold percentage of the THRDMAX value.</td>
</tr>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>The thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The ratio of commits to updates indicates a low commit frequency.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- the resource control table (RCT) for a specific CICS, move the cursor to a CICS jobname and press the zoom key (PF11).
- a particular thread, move the cursor to the thread information line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Here are descriptions for some of the fields displayed on this screen.

**CICS Connection Information**

**Jobname**
The jobname of the connected CICS region.

**Total CPU**
The total CPU rate (percent) of the CICS region connected to DB2. This includes both TCB and SRB time. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

**DB2 CPU**
The total CPU rate (percent) which is attributable to active threads originating from the CICS connection. This value is a subset of the total CICS region CPU utilization. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

**Pct. of THRDMAX**
The percentage of THRDMAX (CICS maximum threads) that the current threads have reached.

**Active Threads**
The number of active threads originating from the CICS connection. This value includes outstanding create thread requests not yet satisfied by DB2. This value excludes threads originating from the CICS connection that are waiting for reuse.

**Commit Rate/Sec**
The number of DB2 commits per second originating from the CICS connection.

The commit rate is computed by determining the number of commits that have occurred since the previous OMEGAMON cycle divided by the elapsed time since the previous cycle.

**RO Commit Rate/Sec**
The number of DB2 read-only commits per second originating from the CICS connection.

This rate is computed by determining the number of read-only commits that have occurred since the previous OMEGAMON cycle divided by the elapsed time since the previous cycle.
CICS Thread Summary

CICS Thread Information

**Elapsed**

The elapsed time since thread creation, or DB2 signon if the thread is reused and signon is driven. When the thread's elapsed time exceeds 24 hours, the format is **DD-HH:MM**

**Parallel Processing Identifiers**

For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.

* Indicates the thread is a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

X Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

**Plannename or Package**

The DB2 plan name (or package name) of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

**Tran**

The CICS transaction identifier active in the thread.

**CPU**

The CPU rate (percent) attributable to the thread. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

**Status**

The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

**GetPg**

The number of thread getpage requests. This logical read request may not actually result in physical I/O if the page requested is currently in the buffer pool.

**Update**

The number of DB2 page updates made by the thread. This value is incremented each time a row in a page is updated, rather than only once for each page updated. Note that pages may be updated when intermediate result tables are created as a result of a qualified SELECT statement. Note also that page writes are scheduled asynchronously according to DB2's deferred write algorithm, not immediately after update or commit.

**Commit**

The number of times the thread successfully completed commit processing.

**Jobname**

The jobname of the connected CICS region.
IMS Thread Summary

The IMS Thread Summary screen provides an overview of DB2 thread activity originating from connected IMS subsystems. It provides information on a connection level about all IMS subsystems identified to DB2. This screen also presents information about individual IMS threads (such as thread elapsed time, DB2 and MVS resource consumption, and DB2 activity).

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>The thread address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for system page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The ratio of commits to updates indicates a low commit frequency.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about

- the IMS connection, move the cursor to the IMS ID line and press the zoom key (PF11).
- a particular thread, move the cursor to the thread line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

The IMS Thread Summary screen displays information about IMS connections and threads.

**IMS Connection Information**

- **IMS ID**: The name of the IMS subsystem connected to DB2. If the IMS subsystem is DL/I batch, OMEGAMON II displays the characters DLIBATCH.
- **CPU%**: The total CPU rate (percent) of IMS regions within the IMS subsystem that have active threads to DB2. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.
Connections  The total number of regions from the IMS subsystem connected to DB2 (dependent and control).

Threads  The total number of threads connected from the IMS subsystem.

IMS Thread Information

Elapsed  The elapsed time since thread creation, or since DB2 signon if the thread is reused. When the thread's elapsed time exceeds 24 hours, the format is DD-HH:MM.

Parallel Processing Identifiers

* Indicates the thread is a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

X Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

Since SQL calls may be interspersed with IMS DLI calls and other activity, this wall clock time value need not solely reflect DB2 processing.

Plannname or Package  The DB2 plan name of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

Jobid  The name of the dependent or control region in which the thread is active.

CPU  The current CPU rate (percent) of the IMS region in which the thread is active. This may include non-DB2 TCB activity. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

Status  The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

GetPg  The number of thread getpage requests. This logical read request may not actually result in physical I/O if the page requested is currently in the buffer pool.

Update  The number of DB2 page updates made by the thread.

This number is incremented each time a row in a page is updated, rather than only once for each page updated. Note that pages may be updated when intermediate result tables are created as a result of a qualified SELECT statement and that page writes are scheduled asynchronously according to DB2's deferred write algorithm, not immediately after update or commit.
| **Commit** | The number of times the thread successfully completed commit processing. If MODE is MULT is specified on the IMS TRANSACT macro which defines the transaction or a WFI region is used, multiple messages may be processed before a commit point is reached, and page locks as well as DEALLOCATE(COMMIT) tablespace and SKCT locks are released. |
| **Connid** | The DB2 connection identifier of the active thread. The connection ID is the same as the IMS ID. It is used to relate an individual thread to the IMS system specified by the IMS ID under IMS Connection Information above. |
Background Thread Summary

The Background Thread Summary screen provides an overview of the activity of all background threads connected to DB2. The top part of the screen provides information about the connections of all background jobs belonging to DB2.

On the lower part of the screen, each row provides information about individual background threads (such as thread elapsed time, DB2 and MVS resource consumption, and DB2 activity).

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>The address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The ratio of commits to updates indicates a low commit frequency.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about

- a particular connection, move the cursor to the connection information line and press the zoom key (PF11).
- a particular thread, move the cursor to the thread information line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

---

**Background Connection Information**

**Job Name**

The name of the background job connected to DB2.

**CPU %**

The total CPU rate (percent) of background jobs that have active threads to DB2. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.
### Background Thread Summary

**Connection**
The number of connections to DB2 that originated from this background thread.

**Active Threads**
The number of active threads that originated from the background connection.

### Background Thread Information

**Elapsed**
The elapsed time since thread creation, or DB2 signon if the thread is reused. This is the elapsed time for the thread. When the thread's elapsed time exceeds 24 hours, the format is **DD-HH:MM**.

**Parallel Processing Identifiers**

For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.

- **P**: Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.
- **X**: Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

### Additional Fields

- **Planname or Package**: The DB2 plan name of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

- **CPU**: The current CPU rate (percent) of the batch or utility region from which the active thread originates. This includes both TCB and SRB time.

- **Status**: The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

- **GetPg**: The number of thread getpage requests. Getpage requests are logical read requests that may not actually result in physical I/O if the page requested is currently in the buffer pool. DB2 resets this count at create thread and signon.

- **Update**: The number of DB2 page updates made by the thread. This value is incremented each time a row in a page is updated, not just once for each page updated. Page writes are scheduled asynchronously according to DB2's deferred write algorithm, not immediately after update or commit. Note that DB2 may update pages when it creates intermediate result tables because of a qualified SELECT statement.
### Background Thread Summary

<table>
<thead>
<tr>
<th><strong>Commit</strong></th>
<th>The number of times the thread successfully completed commit processing. DB2 resets the commit count at create thread and signon. If signon is not driven, the count is cumulative.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jobname</strong></td>
<td>The jobname of the connected batch job or utility.</td>
</tr>
</tbody>
</table>
Thread Summary from Background Job

The Thread Summary from Background Job screen provides information about the activity of background jobs connected to DB2, including thread elapsed time, MVS and DB2 resource consumption, and DB2 activity of individual threads originating from a particular background job.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value. The highlighting for the Thread Summary from Background Job screen is the same as the Background Thread Summary screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>The address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The ratio of commits to updates indicates a low commit frequency.</td>
</tr>
</tbody>
</table>

Navigation

- For more information about a particular thread, move the cursor to the thread information line and press the zoom key (PF11).
- Exceptions that have tripped, type E.A on the top line of the screen.
- Related topics, choose one of the options at the top of the screen.
- Other topics, use the OMEGAMON II PF keys.
**Thread Summary from Background Job**

**Fields**

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elapsed</strong></td>
<td>The elapsed time since thread creation, or DB2 signon if the thread is reused. This is the elapsed time for the thread. When the thread's elapsed time exceeds 24 hours, the format is <strong>DD-HH:MM</strong>.</td>
</tr>
<tr>
<td><strong>Parallel Processing Identifiers</strong></td>
<td>For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.</td>
</tr>
<tr>
<td>*</td>
<td>Indicates the thread is a parallel task generated by an originating thread to process a query request in parallel.</td>
</tr>
<tr>
<td>P</td>
<td>Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.</td>
</tr>
<tr>
<td>X</td>
<td>Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.</td>
</tr>
<tr>
<td><strong>Planname</strong> or <strong>Package</strong></td>
<td>The DB2 plan name of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>The current CPU rate (percent) of the batch or utility region from which the active thread originates. This includes both TCB and SRB time.</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.</td>
</tr>
<tr>
<td><strong>GetPg</strong></td>
<td>The number of thread getpage requests. Getpage requests are logical read requests that may not actually result in physical I/O if the page requested is currently in the buffer pool. DB2 resets this count at create thread and signon.</td>
</tr>
<tr>
<td><strong>Update</strong></td>
<td>The number of DB2 page updates made by the thread. This value is incremented each time a row in a page is updated, not just once for each page updated. Page writes are scheduled asynchronously according to DB2's deferred write algorithm, not immediately after update or commit. Note that DB2 may update pages when it creates intermediate result tables because of a qualified SELECT statement. DB2 resets the system page update count at create thread and signon. If signon is not driven, the page update count is cumulative.</td>
</tr>
<tr>
<td><strong>Commit</strong></td>
<td>The number of times the thread successfully completed commit processing. DB2 resets the commit count at create thread and signon. If signon is not driven, the count is cumulative.</td>
</tr>
<tr>
<td><strong>Jobname</strong></td>
<td>The jobname of the connected batch job or utility.</td>
</tr>
</tbody>
</table>
Distributed Allied Thread Summary

The Distributed Allied Thread Summary screen is one of two summary displays that provide performance information related to Distributed Data Facility (DDF) thread activity. It displays information that can help you identify excessive resource use by distributed allied threads (those used to issue SQL requests to a remote DB2 location).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular thread, move the cursor to the desired line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Planname**
  - or **Package**
    - The DB2 plan name of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package. If a thread accesses multiple remote locations, it will generate a line of output for each location.

- **Parallel Processing Identifier**
  - For DB2 Version 4 and above, a P appears before the plan name if this thread is involved with parallel processing.

- **Status**
  - The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

- **Remote LUname**
  - The VTAM logical unit name of the remote DB2 subsystem to which the thread has issued an SQL request.
### Distributed Allied Thread Summary

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV</td>
<td>The number of VTAM APPC allocate conversation requests that have been issued to the remote DB2 subsystem since thread creation (or DB2 signon if the thread is reused).</td>
</tr>
<tr>
<td>SQL Sent</td>
<td>The number of SQL calls sent to the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Dist Local Elapsed</td>
<td>The total amount of time the thread has spent waiting for responses to remote SQL requests since thread creation or DB2 signon (includes remote DB2 processing time, VTAM processing time, and network time).</td>
</tr>
<tr>
<td>Dist Remote Elapsed</td>
<td>The amount of time that has been used in processing the thread’s SQL requests at the remote location since thread creation or DB2 signon. This field applies only to system directed access (private protocols). If application directed access (DRDA protocols) is used, this field displays 0.</td>
</tr>
<tr>
<td>Remote CPU</td>
<td>The amount of CPU time in seconds that has been used in processing the thread’s SQL requests at the remote location since thread creation or DB2 signon. This field applies only to system directed access (private protocols). If application directed access (DRDA protocols) is used, this field will be 0.</td>
</tr>
</tbody>
</table>
Distributed Database Access Thread Summary

The Distributed Database Access Thread Summary screen is one of two summary displays that provide performance information related to Distributed Data Facility (DDF) activity. This screen displays information that can help you identify excessive resource use by distributed database access threads (server threads responding to SQL requests from a remote DB2 location).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular thread, move the cursor to the thread line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**Elapsed**

The elapsed time since thread creation. When the thread’s elapsed time exceeds 24 hours, the format is **DD-HH:MM**.

**Parallel Processing Identifiers**

For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.

* Indicates the thread is a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

**Planname or Package**

The DB2 plan name or package name of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

**Workstation**

The workstation identifier displays in some types of threads instead of Planname or Authid.

**Authid**

The DB2 thread authorization identifier of the active thread.
### Distributed Database Access Thread Summary

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>The CPU rate (percent) attributable to the thread. Database access threads</td>
</tr>
<tr>
<td></td>
<td>execute in MVS SRB mode. The displayed rate is entirely SRB time (no</td>
</tr>
<tr>
<td></td>
<td>TCB time).</td>
</tr>
<tr>
<td>Status</td>
<td>The current DB2 status of the thread. See “DB2 Thread Status” on page 619</td>
</tr>
<tr>
<td></td>
<td>for definitions of all possible status values.</td>
</tr>
<tr>
<td>Remote LUname</td>
<td>The VTAM logical unit name of the requesting DB2 subsystem whose SQL</td>
</tr>
<tr>
<td></td>
<td>request is being serviced by the thread.</td>
</tr>
<tr>
<td>CV</td>
<td>The number of VTAM APPC allocate conversation requests that have been</td>
</tr>
<tr>
<td></td>
<td>received from the remote (requesting) DB2 subsystem since thread creation</td>
</tr>
<tr>
<td></td>
<td>or DB2 signon.</td>
</tr>
<tr>
<td>Getpg</td>
<td>The number of getpage requests issued by the thread since thread creation.</td>
</tr>
<tr>
<td>SQL Recv</td>
<td>The number of SQL calls received from the requesting location since thread</td>
</tr>
<tr>
<td></td>
<td>creation.</td>
</tr>
<tr>
<td>Rows Sent</td>
<td>The number of rows sent to the requesting location since thread creation.</td>
</tr>
</tbody>
</table>
Utility Summary

The Utility Summary screen displays all active utilities and utilities that have been started but have not yet completed running due to abnormal termination. Each row provides information about an individual utility (information such as thread elapsed time, utility phase, and record count).

Highlighting

OMEGAMON for DB2 highlights the following fields when any of the exceptions described below tripped in this cycle:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>This thread address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>Status</td>
<td>UTIS</td>
<td>This utility has been started but has not completed running due to abnormal termination.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about

- a particular DB2 utility, move the cursor to the utility information line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
Utility Summary

Fields

Here are descriptions for some of the fields displayed on this screen.

**Elapsed**  
The elapsed time since thread creation. When the thread’s elapsed time exceeds 24 hours, the format is **DD-HH:MM**.

* **Parallel Processing Identifiers**

For DB2 Version 4 and above, an asterisk (*) or P appears after the elapsed time if this thread is involved with parallel processing.

- **P**  
  Indicates the thread is the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

- **X**  
  Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

When status field displays UTIL-STOP, this field is N/A (not applicable).

**Utility**  
The name of the DB2 utility.

**UtilID**  
The identifier that defines the utility to DB2. Each utility that has been started and is not yet terminated must have a unique utility ID.

**Phase**  
The executing phase of the DB2 utility. If the utility is stopped, be sure to specify this phase when you restart it.

**Count**  
The total number of items (such as records or pages) that have been processed. The type of item depends on the utility and its phase. For more information about this field, refer to the Utilities section of IBM DATABASE2 Command and Utility Reference.

**Status**  
The status of the DB2 utility. The status is UTIL-STOP if the DB2 utility has been started but has not yet completed running due to abnormal termination. Refer to “DB2 Thread Status” on page 619 for DB2 thread status.

**CPU**  
The current CPU rate of the DB2 utility job. When status field displays UTIL-STOP, this field is not applicable.
**Inactive Threads**

The Inactive Thread screen displays information about threads placed in an inactive state after they have performed a commit and released all resources, or when the maximum number of remote threads has been reached.

**Highlighting**

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>MDBW</td>
<td>Thread currently waiting because maximum number of database access threads has been reached.</td>
</tr>
</tbody>
</table>

**Navigation**

For information about other types of threads, choose one of the options displayed at the top of the screen.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Location**: The name of the location requesting information.
- **Authid**: The authorization identifier.
- **Corrid**: The correlation identifier. If the application requestor is a DB2 system, this is the same correlation ID assigned at the requestor. If the application requestor is not DB2, this is the name of the job, task, or process that is being serviced.
- **LUWID**: The logical unit of work ID. This consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods).
- **Status**: If this thread is currently queued because the maximum number of database access threads has been reached, QUEUED appears in this column.
Filter Options For Thread Activity Displays

The Filter Options For Thread Activity Displays screen allows you to specify filter criteria to use for thread activity screens. The values you specify on this screen are used for the remainder of the session.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are explanations for some of the fields on this screen:

- **plan**: The DB2 plan name of the active thread.
- **package/DBRM**: The DB2 package name or DBRM name of the active thread.
- **collection**: The package collection identifier. This field appears only if a package is being used.
- **authid**: The DB2 thread authorization identifier of the active thread.
- **connid**: The DB2 connection identifier of the active thread.
- **corrid**: The correlation identifier. If the application requestor is a DB2 system, this is the same correlation ID assigned at the requestor. If the application requestor is not DB2, this is the name of the job, task, or process that is being serviced.
- **location**: The name of the location requesting information.
- **DB2STAT**: See “DB2 Thread Status” on page 619 for definitions of all possible DB2 status values.
- **parentace**: parentace=0 eliminates child parallel tasks from the Thread Activity displays.
- **getpages**: The number of getpage requests issued by the thread since thread creation.
- **updates**: The number of DB2 page updates made by the thread since creation.
- **commits**: The number of times the thread successfully completed commit processing. DB2 resets the commit count at thread create and signon. If signon is not driven, the count is cumulative.
- **elaptime**: The elapsed time since thread creation.
- **elaptime/commit**: Average amount of elapsed time between commits.
**db2time**  
The total in-DB2 elapsed time in seconds for an active thread.

**db2time/commit**  
Average in-DB2 elapsed time between commits.
Functions Thread Summary

The Functions Thread Summary screen provides information about threads that are executing user functions. Each row provides information about an individual thread, including information about jobname, ASID, CPU utilization, number of connections and number of threads.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys

Fields

Here are explanations for some of the fields on this screen:

- **Jobname**: The name of the WLM stored procedure address space.
- **ASID**: The address space identifier of the WLM stored procedure address space.
- **CPU %**: The percentage of CPU time utilized.
- **Connection**: The number of connections.
- **Threads**: The number of threads.
- **Elapsed**: The elapsed time since the function thread was created.
- **Planname**: The DB2 plan name.
- **Schema**: The schema name of the user-defined function.
- **Function**: The name of the user-defined function.
- **PGMName**: The program name of the user-defined function.
- **D/W**: This field must always be specified as WLM.
- **ASID**: The ASID of the WLM stored procedure address space in which the user-defined function is executing.
- **JOBNAME**: The name of the job executing the user function.
Stored Procedures Thread Summary

The Stored Procedures Thread Summary screen provides information about threads that are executing stored procedures. Each row provides information about an individual thread, including information about jobname, ASID, CPU utilization, number of connections and number of threads.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys

Fields

Here are explanations for some of the fields on this screen:

- **Jobname**: The name of the job executing the stored procedure.
- **ASID**: The address space identifier of the stored procedure.
- **CPU %**: The percentage of CPU time utilized.
- **Connection**: The number of connections.
- **Threads**: The number of threads.
- **Elapsed**: The elapsed time since the stored procedure was executed.
- **Planname**: The DB2 plan name.
- **Schema**: The schema name of the stored procedure.
- **Store Proc Name**: The name of the stored procedure.
- **PGMName**: The program name of the stored procedure.
- **D/W**: This field can be specified as DB2 or WLM.
- **ASID**: The ASID of the stored procedure address space.
- **JOBNAME**: The name of the job executing the stored procedure.
Triggers Thread Summary

The Triggers Thread Summary screen provides information about threads that are exceeding the threshold for number of stacked triggers. Each row provides information about an individual thread, including information about jobname, ASID, CPU utilization, number of connections and number of threads.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options at the top of the screen.

- other topics, use the OMEGAMON II PF keys

Fields

Here are explanations for some of the fields on this screen:

- **Trigger name**: The name of the job executing the trigger.
- **In DB2 Elapsed**: The total in-DB2 elapsed time in seconds for the triggers.
- **In DB2 CPU**: The total in-DB2 CPU time in seconds for the trigger.
- **SQL Requests**: The number of SQL statements issued in the trigger.
- **Waits**: The total number of times that the thread had to wait for a class 8 event to complete while executing the trigger. This field requires an accounting class 8 trace. If this trace is not active, **N/A** appears.
- **In DB2 Wait Time**: The total amount of time that the thread waited.
- **Plannname**: The DB2 plan name.
- **Job name**: The name of the job that is executing the trigger.
Sysplex Parallel Thread Summary

The Sysplex Parallel Thread Summary screen is an overview of the activity of all parallel tasks with an originating thread on another DB2 in the data sharing group. Each row provides information about an individual thread, including information about thread response time, DB2 and MVS resource consumption, and DB2 activity.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed</td>
<td>ETIM</td>
<td>This thread has reached the elapsed time threshold value.</td>
</tr>
<tr>
<td>CPU</td>
<td>TCPU</td>
<td>The thread address space has excessive CPU utilization.</td>
</tr>
<tr>
<td>GetPg</td>
<td>GETP</td>
<td>The ratio of getpage requests to read I/Os indicates poor read efficiency.</td>
</tr>
<tr>
<td>Update</td>
<td>PGUP</td>
<td>The rate for system page updates is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The number of updates since the last successful commit is high.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- a particular thread, move the cursor to the thread information line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Sysplex Parallel Thread Summary

Fields

The Sysplex Parallel Thread Summary screen displays information under the following headings:

**Elapsed**

The elapsed time since thread creation, or since DB2 signon if the thread is reused. When the thread’s elapsed time exceeds 24 hours, the format is **DD-HH:MM**.

**Parallel Processing Identifiers**

For DB2 Version 4 and above, an asterisk (*), P, or X appears after the elapsed time if this thread is involved with parallel processing.

- * Indicates that the thread represents a parallel task initiated on behalf of another thread to process a query request in parallel.
- **P** Indicates that the thread is the parent of parallel task(s) created to process a query request. Activity performed by the parallel tasks on this thread’s behalf will not be included in this thread.
- **X** Indicates that this thread represents a parallel task initiated on behalf of another thread on another DB2 for sysplex parallelism.

**Plannname** or **Package**

The DB2 plan name (or package name) of the active thread. If you selected the T option from the Realtime Main Menu, this screen displays the information by plan. If you selected the U option, this screen displays the information by package.

**CPU**

The current CPU rate (percent) of the TSO address space from which the thread originates. This includes both TCB and SRB time. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

**Status**

The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

**GetPg**

The number of thread getpage requests. This logical read request may not actually result in physical I/O if the page requested is currently in the buffer pool.

**Update**

The number of page updates made by the thread. This value is incremented each time a row in a page is updated, rather than only once for each page updated. Note that pages may be updated when intermediate result tables are created as a result of a qualified SELECT statement. Note also that page writes are scheduled asynchronously according to DB2’s deferred write algorithm, not immediately after update or commit.
**Commit**  The number of times the thread successfully completed commit processing.

If a QMF™ thread user exits from a query panel to other than the home panel, tablespace locks defined with DEALLOCATE(COMMIT) will be retained until commit is effected. This is also true of SPUFI users who do not specify AUTOCOMMIT, or who specify DEFER on completion of a transaction.

**Jobname**  The jobname of the active thread user.
Thread Detail

The Thread Detail screen provides detailed information about the activity of an individual thread or parallel task (DB2 Version 4 and above). A parallel task is created from an originating thread to process a part of a query. Thread activity is broken down into general status and resource consumption information, and buffer manager activity.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>ARCM</td>
<td>Backout requires an archive tape log mount.</td>
</tr>
<tr>
<td></td>
<td>ETIM</td>
<td>This thread reached the elapsed time threshold value</td>
</tr>
<tr>
<td></td>
<td>GETP</td>
<td>The ratio for getpages per read I/O is high.</td>
</tr>
<tr>
<td></td>
<td>INDB</td>
<td>The thread is indoubt and terminated.</td>
</tr>
<tr>
<td></td>
<td>PREF</td>
<td>The thread sequential prefetch rate is high.</td>
</tr>
<tr>
<td></td>
<td>RIO</td>
<td>The synchronous read I/O rate is high.</td>
</tr>
<tr>
<td></td>
<td>PGUP</td>
<td>The rate of system page updates is high.</td>
</tr>
<tr>
<td></td>
<td>WTRE</td>
<td>Wait resource time is high.</td>
</tr>
<tr>
<td>Total Elapsed Time</td>
<td>ETIM</td>
<td>This thread reached the elapsed time threshold value</td>
</tr>
<tr>
<td>CPU Utilization</td>
<td>TCPU</td>
<td>The CPU utilization associated with the thread is high.</td>
</tr>
<tr>
<td>Current Drain Lock Wait</td>
<td>WDLK</td>
<td>The thread reached drain lock wait threshold.</td>
</tr>
<tr>
<td>Current Drain of Claims</td>
<td>WCLM</td>
<td>The thread reached wait for drain of claims threshold.</td>
</tr>
<tr>
<td>Current Global Lock Wait</td>
<td>WGLK</td>
<td>The thread reached global lock wait threshold.</td>
</tr>
<tr>
<td>Current Service Task Wait</td>
<td>WSRV</td>
<td>The thread reached DB2 service wait threshold.</td>
</tr>
<tr>
<td>Current Archive Log Mode</td>
<td>WLGQ</td>
<td>The thread reached Archive Log Mode (Quiesce) wait threshold.</td>
</tr>
<tr>
<td>(Quiesce) Wait</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Stored Procedure</td>
<td>WSPS</td>
<td>The thread reached stored procedure schedule wait threshold.</td>
</tr>
<tr>
<td>Schedule Wait</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Fields

Here are explanations for some of the fields on this screen:

**Thread Identifier**
OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

**Attachment Identifier**
This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
- **CICS**: The CICS jobname, task name, task number, terminal ID, and thread type.
  
  The thread type is:
  - **Pool**: The thread in use is a pool thread.
  - **Enty**: The thread in use is a nonprotected entry thread.
  - **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

- **IMS**: The IMS region number, transaction name, region name, and terminal ID (LTERM).
- **TSO**: The TSO user ID and region ASID.
- **System**: The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

**Distributed Thread Identifier**
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

- **Type**: The distributed thread type.
  
  - **Distributed Allied**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
  - **Database Access**: A responding thread; one that is serving a remote DB2 location by responding to an SQL call.
Thread Detail

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

```
USCAC001.O2D22A.A1FE8E04B9D4=8
```

**System**
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

**Thread Status**

**DB2 Status**
See “DB2 Thread Status” on page 619 for definitions of all possible status values.

**MVS Status**
The current MVS status of the thread:

- **Asid Notdisp**
The address space in which the task is active is not available for dispatch.
- **DB2 I/O Wait**
The thread is waiting for the completion of DB2 database I/O.
- **Logical Swap**
The address space is currently logically swapped out.
- **Swapped Out**
The memory is physically swapped out.
- **Using CPU**
The thread is currently using CPU cycles.
- **Wait-Dispatch**
The task is waiting on the active CPU dispatching queue. It is available for use, but is not yet running on a processor.
- **Wait-Misc**
The thread is waiting for some other reason and is not on the available dispatch queue.

**Note:** If the screen displays a distributed database access thread, this field will be blank.

**Total Elapsed Time**
The total elapsed time for the thread in the format *hh:mm:ss.th.* Elapsed time is the time which has elapsed since thread creation or DB2 signon.

**CPU Utilization**
The CPU rate (percent) associated with the thread.
For non-CICS threads, this is the CPU rate of the address space from which the thread originates. For CICS threads, this is the CPU rate attributable to the thread originating from the CICS connection. For more information about CPU use, see “Analyzing DB2 CPU Usage” on page 597.

**Total CPU Time**
The total amount of CPU time accumulated for the thread. This value includes only MVS TCB time.


**Thread Information 101**

**Thread Detail**

**Total Parallel Tasks**
The total number of parallel tasks that were created on behalf of this thread. This field appears only for DB2 Version 4 and above.

**Current Parallel Tasks**
The number of parallel tasks currently executing. This field is displayed only for DB2 Version 4 and above.

**User Defined Functions**

*Note:* These fields apply only to DB2 Version 6.1 and above.

**TCB Time (SQL)**
Accumulated TCB time consumed in DB2 processing SQL statements issued by user-defined functions.

**Wait for TCB Time**
Total elapsed time spent waiting for an available TCB before the user-defined function could be scheduled.

**Elapsed Time**
Total elapsed time spent in user-defined functions including time executing SQL statements.

**Elapsed Time (SQL)**
Total elapsed time spent in user-defined functions executing SQL statements.

**SQL Events**
Number of SQL entry/exit events performed by user-defined functions.

**Stored Procedures**

*Note:* These fields apply only to DB2 Version 6.1 and above.

**Total CPU**
The amount of CPU time (TCB time) spent in DB2 processing SQL statements issued by stored procedures for this thread.

**Elapsed Time**
Total elapsed time spent in stored procedures including time executing SQL statements.

**Elapsed Time (SQL)**
Total elapsed time spent for stored procedures executing SQL statements.

**Triggers**

*Note:* These fields apply only to DB2 Version 6.1 and above.

**TCB not in Enclave**
The accumulated TCB time consumed while executing triggers not under an enclave.

**Elapsed not in Enclave**
The accumulated elapsed time expended executing triggers not under an enclave.

**TCB prior to Enclave**
The accumulated TCB time consumed prior to enclave creation time.

**SavePoints**

*Note:* SavePoint fields apply for DB2 Version 7.1 and above.

**Savepoint Requests**
The number of savepoints set.
Thread Detail

**Thread Detail**

- **Release Savepoints**: The number of savepoints deleted.
- **Rollback Savepoints**: The number of rollback-to-savepoint requests issued.

### In-DB2 Times (Class 2)

**Note**: In-DB2 Times require an Accounting Class 2 trace. OMEGAMON II displays N/A if this DB2 trace is not active.

- **Elapsed Time (Total)**: The total in-DB2 elapsed time for the thread in seconds.
- **Elapsed Time (Current)**: The total amount of time spent executing the currently active SQL statement.
- **CPU Time (Total)**: The total in-DB2 CPU time for the thread. This will always include MVS TCB time only. SRB time is not included.
- **CPU Time (Current)**: The total amount of CPU time used by the currently active SQL statement in seconds. The value is always zero for database access threads.
- **Stored Procedure CPU Time**: The amount of CPU time (TCB time) spent in DB2 processing SQL statements issued by DB2 stored procedures for this thread. This field appears only for DB2 Version 4 and above.

### Waits (Class 3)

**Note**: Wait times require an Accounting Class 3 trace. OMEGAMON II displays N/A if this DB2 trace is not active.

Three values are provided for the Class 3 fields:

- **Total** displays the total wait time that has elapsed.
- **Current** displays the amount of time that has elapsed waiting for the current event to complete.
- **Count** displays the total number of waits.

- **Synchronous I/O Wait**: Wait for synchronous I/O reads or writes.
- **Asynchronous Read I/O Wait**: Wait for read I/O performed under another thread (e.g. list or sequential prefetch).
- **Asynchronous Write I/O Wait**: Wait for write I/O performed under another thread (e.g. deferred writes).
- **Local Lock/Latch Wait**: Wait for locks or latches.
- **Page Latch Wait**: Wait for page latches.
- **Drain Lock Wait**: Wait to acquire drain locks.
- **Drain of Claims Wait**: Wait for claims to be released after acquiring drain lock.
<table>
<thead>
<tr>
<th>Thread Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Lock Wait</td>
<td>Wait for global lock in a data sharing environment. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Inter-System Message Send Wait</td>
<td>Wait for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DB2 Service Task Wait</td>
<td>Wait for DB2 services. Types of DB2 services include open/close of dataset, DFHSM recall of a dataset, SYSLGRNG update, or define/extend/delete of dataset, commit phase 2 for read only threads. <strong>Note:</strong> This field applies only for versions of DB2 prior to Version 6.1.</td>
</tr>
<tr>
<td>Archive Log Mode (Quiesce) Wait</td>
<td>Wait for ARCHIVE LOG MODE (QUIESCE) command to complete.</td>
</tr>
<tr>
<td>Archive Read from Tape Wait</td>
<td>Waits for reads of archive log from tape.</td>
</tr>
<tr>
<td>Stored Procedure Schedule Wait</td>
<td>Wait for an available TCB in the DB2 stored procedures address space to schedule a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Switch to Open/Close Wait</td>
<td>Wait for switches to the OPEN/CLOSE service. <strong>Note:</strong> This field applies only for DB2 Version 6.1 and above.</td>
</tr>
<tr>
<td>Switch to SYSLGRNG Service Wait</td>
<td>Wait for switches to the SYSLGRNG recording service. <strong>Note:</strong> This field applies only for DB2 Version 6.1 and above.</td>
</tr>
<tr>
<td>Switch to DMS Waits</td>
<td>Wait for switches to the database manager service. <strong>Note:</strong> This field applies only for DB2 Version 6.1 and above.</td>
</tr>
<tr>
<td>Other Service Waits</td>
<td>Wait for switches to other DB2 service tasks. <strong>Note:</strong> This field applies only for DB2 Version 6.1 and above.</td>
</tr>
<tr>
<td>Force at Commit Waits</td>
<td>Wait for force–at–commit. <strong>Note:</strong> This field applies only for DB2 Version 6.1 and above.</td>
</tr>
<tr>
<td>Global Child L-Locks</td>
<td>Wait due to global contention for child L-locks. <strong>Note:</strong> This field applies only for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Global Other L-Locks</td>
<td>Wait due to global contention for other L-locks. <strong>Note:</strong> This field applies only for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Global Pageset/Partition P-Locks</td>
<td>Wait due to global contention for pageset/partition P-locks. <strong>Note:</strong> This field applies only for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Global Page P-Locks</td>
<td>Wait due to global contention for page P-locks. <strong>Note:</strong> This field applies only for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Global Other P-Locks</td>
<td>Wait due to global contention for other P-locks. <strong>Note:</strong> This field applies only for DB2 Version 7.1 and above.</td>
</tr>
</tbody>
</table>
Thread Buffer Pool Activity

The Thread Buffer Pool Activity screen provides detailed information about buffer manager activity at the buffer pool level for an individual thread.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception threshold exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as other thread detail screens.</td>
</tr>
<tr>
<td>Getpage Requests</td>
<td>GETP</td>
<td>The ratio of getpages per read I/O is low, indicating poor read efficiency.</td>
</tr>
<tr>
<td>Getpage/Read I/O</td>
<td>GETP</td>
<td>The ratio of getpages to read I/Os is low, indicating poor read efficiency.</td>
</tr>
<tr>
<td>Synchronous Reads</td>
<td>RIO</td>
<td>The synchronous read I/O rate is high.</td>
</tr>
<tr>
<td>Page Updates</td>
<td>PGUP</td>
<td>The rate of page updates is high.</td>
</tr>
<tr>
<td>Sequential Prefetch Reqs</td>
<td>PREF</td>
<td>The thread sequential prefetch rate is high.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
- **Package**: The DB2 package name of the active thread.
- **Collection**: The package collection id. This field appears only if a package is being used.
Attachment Identifier
This information changes depending upon the type of connection:

**Batch**
The MVS jobname and ASID.

**CICS**
The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:

- **Pool**
The thread in use is a pool thread.
- **Entry**
The thread in use is a nonprotected entry thread.
- **Prot**
The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

**IMS**
The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**
The TSO user ID and region ASID.

**System**
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

Distributed Thread Identifier
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

- **Type**
The distributed thread type.

- **Distributed Allied**
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**
  A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

- \texttt{luw-id=token}
  The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the \textit{Luwid} field displays data such as the following:

  \texttt{USCACO01.O2D22A.A1FE8E04B9D4=8}

**Thread Status**

**Buffer Pool**
The buffer pool for which thread activity is being reported.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getpage Requests</td>
<td>The number of thread getpage requests. This logical read request may not actually result in physical I/O of the page request currently in the buffer pool.</td>
</tr>
<tr>
<td>Failed Getpage Requests</td>
<td>The number of times a conditional getpage request could not be satisfied. Conditional getpage, used only with queries being processed in parallel, will not wait for a page that is not currently in the buffer pool.</td>
</tr>
<tr>
<td>Synchronous Read I/O</td>
<td>The number of synchronous read I/O requests issued by the thread.</td>
</tr>
<tr>
<td>Getpage/Read I/O</td>
<td>The number of getpage requests divided by the number of synchronous read I/Os. This value does not include prefetch requests, because each getpage request may return a variable number of pages (from one to 16).</td>
</tr>
<tr>
<td>Page Updates</td>
<td>This number is incremented each time a row in a page is updated, not just once for each page updated. Note that pages may be updated when intermediate result tables are created as a result of a qualified SELECT statement, even though SELECTs are generally thought of as read only operations. Pages that have been updated are written asynchronously by DB2, according to DB2's internal deferred write algorithm, not immediately after update or commit.</td>
</tr>
<tr>
<td>Seq Prefetch Requests</td>
<td>The number of prefetch requests issued by the thread.</td>
</tr>
<tr>
<td>Dynamic Prefetch Requests</td>
<td>Unlike normal read I/O, sequential prefetch read I/O is performed asynchronously with the user's request. It provides a read-ahead capability. A single sequential prefetch I/O results in multiple pages being read. Threads with excessive sequential prefetch rates may cause a negative impact on overall DB2 performance.</td>
</tr>
<tr>
<td>Prefetch Pages Read</td>
<td>The number of prefetch pages read.</td>
</tr>
<tr>
<td>Prefetch Pages in Hiperpool</td>
<td>The number of pages that were found in a hiperpool and moved to the virtual buffer pool as a result of a prefetch request. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>Hiperpool Reads</td>
<td>The number of successful synchronous requests to move a page from a hiperpool to a virtual buffer pool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>Failed Hiperpool Reads</td>
<td>The number of times the page requested in the hiperpool has been discarded by MVS. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>Hiperpool Writes</td>
<td>The number of successful synchronous requests to move a page from a virtual buffer pool to a hiperpool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
</tbody>
</table>
Thread Information 107

Thread Buffer Pool Activity

**Failed Hiperpool Writes**
The number of unsuccessful requests to write a page to a hiperpool because of a shortage of expanded storage. (Hiperpools are not supported in DB2 Version 8.1)

**Immediate Writes**
The number of immediate (synchronous) writes to DASD.

**BP Hit Percentage**
The percentage of getpages issued by the thread for which the data was already in the buffer pool.
Thread Package Summary

The Thread Package Summary Display displays a summary of activity that has occurred for all packages/DBRMs that have been executed by this thread. It provides information collected for accounting classes 7 and 8. If these DB2 traces are not active, this information is not available.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as other thread detail screens.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- a specific package/DBRM, move the cursor to the desired line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are explanations for some of the fields on this screen:

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
- **Package**: The DB2 package name of the active thread.
- **Collection**: The package collection id. This field appears only if a package is being used.

**Attachment Identifier**

This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:

- **Pool**: The thread in use is a pool thread.
- **Enty**: The thread in use is a nonprotected entry thread.
- **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

The IMS region number, transaction name, region name, and terminal ID (LTERM).

The TSO user ID and region ASID.

The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

Distributed Thread Identifier

The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

- **Type**: The distributed thread type.
  - **Distributed**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
  - **Allied**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
  - **Database Access**: A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

Luwid

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the *Luwid* field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

Package list

For each entry in the package list, the display indicates the location, collection, and package that were bound into the plan.

Location

The name of the location where the package was bound. For remote packages, times displayed represent the time spent locally to execute the remote package.
Thread Package Summary

Collection

The package collection id. This field appears only if a package is being used.

Package

The DB2 package name of the active thread.

Package/DBRM Information

Program

Program filtering input field. You can enter a specific package or DBRM that you wish to display on the panel. You can use wildcard characters in this field. For example, enter DSNESM* to display all packages or DBRMs that begin with DSNESM.

Package/DBRM

The name of the program for which data is reported.

An asterisk (*) appears after the program name of the currently executing program (or most recently executed if not currently executing).

SQL Requests

The number of SQL statements issued in this package or DBRM.

Total Elapsed Time

The total amount of time that has elapsed while executing in this package or DBRM. This field requires DB2 accounting class 7 trace. If this trace is not active, N/A appears.

Total CPU Time

The total amount of CPU time used while executing in this package or DBRM. This field requires DB2 accounting class 7 trace. If this trace is not active, N/A appears.

Waits

The total number of times that the thread had to wait for a class 8 event to complete while executing in this package or DBRM. This field requires an accounting class 8 trace. If this trace is not active, N/A appears.

Total Wait Time

The total amount of time spent waiting for a Class 8 Event to complete while executing in this package or DBRM. This field requires an accounting class 8 trace. If this trace is not active, N/A appears.
The Package Detail screen provides detailed information about the activity that has occurred for specific packages/DBRMs that have been executed by a particular thread. It provides information collected for accounting classes 7 and 8. If these DB2 traces are not active, this information is not available.

**Highlighting**

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as other thread detail screens.</td>
</tr>
<tr>
<td>Current Drain Lock Wait</td>
<td>WDLK</td>
<td>The thread reached drain lock wait threshold.</td>
</tr>
<tr>
<td>Current Drain of Claims Wait</td>
<td>WCLM</td>
<td>The thread reached wait for drain of claims threshold.</td>
</tr>
<tr>
<td>Current Service Task Wait</td>
<td>WSRV</td>
<td>The thread reached DB2 service wait threshold.</td>
</tr>
<tr>
<td>Current Archive Log Mode (Quiesce) Wait</td>
<td>WLGQ</td>
<td>The thread reached ARCHIVE LOG MODE (QUIESCE) wait threshold.</td>
</tr>
<tr>
<td>Current Stored Procedure Schedule Wait</td>
<td>WSPS</td>
<td>The thread reached the wait for stored procedure schedule threshold.</td>
</tr>
<tr>
<td>Current Global Lock Wait</td>
<td>WGLK</td>
<td>The thread reached the global lock wait threshold.</td>
</tr>
</tbody>
</table>

**Navigation**

To return to the Thread Package Summary screen, press PF3.

**Fields**

The Thread Package Detail Screen displays the following fields:

- **Thread Identifier**
  - OMEGAMON II identifies the thread to which the information on this screen applies.
  - **Plan**: The DB2 plan name of the active thread.
  - **Connid**: The DB2 connection identifier of the active thread.
  - **Corrid**: The DB2 correlation identifier of the active thread.
  - **Authid**: The DB2 authorization identifier of the active thread.
**Attachment Identifier**

This information changes depending upon the type of connection:

**Batch**

The MVS jobname and ASID.

**CICS**

The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:

- **Pool**: The thread in use is a pool thread.
- **Enty**: The thread in use is a nonprotected entry thread.
- **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

**IMS**

The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**

The TSO user ID and region ASID.

**System**

The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

**Distributed Thread Identifier**

The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**

The distributed thread type.

- **Distributed Allied**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
- **Database Access**: A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luqid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**Package Information**

**Program**

The program name.
**Type**  
The program type, either PACKAGE or DBRM.

**Location**  
The name of the location where the package was bound. For remote packages, times displayed represent the time spent locally to execute the remote package.

The consistency token.

**Version**  
The version specified at the time the package was bound.

**Collection**  
The package collection id. This field appears only if a package is being used.

**SQL Request Count**  
The number of SQL statements issued.

### In-DB2 Times

**Note:** In-DB2 Times require an Accounting Class 7 trace. OMEGAMON II displays N/A if this DB2 trace is not active.

For each field described below, OMEGAMON II provides two statistics:
- Total is the total amount of time the thread spends processing this package or DBRM.
- Current is the total amount of time spent processing the currently active SQL statement.

**Elapsed Time**  
The amount of time that has elapsed while processing this package or DBRM.

**CPU Time**  
The amount of CPU time spent processing this package or DBRM.

### Waits

**Note:** Wait times require an Accounting Class 8 trace. OMEGAMON II displays N/A if this DB2 trace is not active.

For each field described below, three statistics are provided:
- Total is the total wait time.
- Current is the amount of time that has elapsed waiting for the current event to complete.
- Count is the total number of waits.

**Synchronous I/O Wait**  
Waits for synchronous I/O reads or writes.

**Asynchronous Read I/O Wait**  
Waits for read I/O performed under another thread (for example, list or sequential prefetch).

**Asynchronous Write I/O Wait**  
Waits for write I/O performed under another thread (e.g. deferred writes).

**Local Lock/Latch Wait**  
Waits for locks or latches.

**Page Latch Wait**  
Waits for page latch.

**Drain Lock Wait**  
Waits to acquire drain lock.

**Drain of Claims Wait**  
Waits for claims to be released after acquiring drain lock.
<table>
<thead>
<tr>
<th>Wait</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Lock</td>
<td>Wait for global lock in a data sharing environment. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Inter-System</td>
<td>Wait for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Message Send</td>
<td>Wait for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Inter-System</td>
<td>Wait for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Message Send</td>
<td>Wait for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DB2 Service Task Wait</td>
<td>Waits for DB2 services. Types of DB2 services include open/close of dataset, DFHSM recall of a dataset, SYSLGRNG update, or define/extend/delete of dataset, commit phase 2 for read only threads.</td>
</tr>
<tr>
<td>Archive Log</td>
<td>Wait for ARCHIVE LOG MODE (QUIESCE) command to complete.</td>
</tr>
<tr>
<td>Mode (Quiesce)</td>
<td>Wait for ARCHIVE LOG MODE (QUIESCE) command to complete.</td>
</tr>
<tr>
<td>Archive Read</td>
<td>Wait for an available TCB in the DB2 stored procedures address space to schedule a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>from Tape Wait</td>
<td>Wait for an available TCB in the DB2 stored procedures address space to schedule a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Stored Procedure</td>
<td>Wait for an available TCB in the DB2 stored procedures address space to schedule a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Schedule Wait</td>
<td>Wait for an available TCB in the DB2 stored procedures address space to schedule a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
</tbody>
</table>
Current SQL Counts

The Current SQL Counts screen provides detailed information about the SQL activity of an individual thread. This information comes from the Relational Data Manager. It includes data definition language calls and data manipulation information. DB2 control counts are also supplied.

The screen also displays counts related to RID pool usage as well as parallel I/O activity.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>ARCM</td>
<td>Backout requires an archive tape log mount.</td>
</tr>
<tr>
<td></td>
<td>GETP</td>
<td>The rate for getpages per read I/O is low.</td>
</tr>
<tr>
<td></td>
<td>INDB</td>
<td>The thread is indoubt and terminated.</td>
</tr>
<tr>
<td></td>
<td>PREF</td>
<td>The sequential prefetch rate is high.</td>
</tr>
<tr>
<td></td>
<td>RIO</td>
<td>The synchronous read I/O rate is high.</td>
</tr>
<tr>
<td></td>
<td>ETIM</td>
<td>This thread reached the elapsed time threshold value.</td>
</tr>
<tr>
<td></td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td></td>
<td>WTRE</td>
<td>The wait resource time is high.</td>
</tr>
<tr>
<td>Commit</td>
<td>COMT</td>
<td>The ratio of commits to updates indicates a low commit frequency.</td>
</tr>
<tr>
<td>Abort</td>
<td>COMT</td>
<td>Backout processing caused by aborts may have reduced the commit rate.</td>
</tr>
<tr>
<td>SQL CALL time out</td>
<td>WSPS</td>
<td>This thread reached the threshold value to wait for an available TCB in order to schedule a stored procedure.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.
Fields

Here are descriptions of some of the fields displayed on this screen:

**Thread Identifier**
OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

**Attachment Identifier**
This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
- **CICS**: The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:
  - **Pool**: The thread in use is a pool thread.
  - **Enty**: The thread in use is a nonprotected entry thread.
  - **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.
- **IMS**: The IMS region number, transaction name, region name, and terminal ID (LTERM).
- **TSO**: The TSO user ID and region ASID.

**Distributed Thread Identifier**
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.
Type

The distributed thread type.

Distributed Allied

A requesting thread; one that has issued an SQL call to a remote DB2 location.

Database Access

A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

Luwid

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

luw-id=token

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

USCACO01.O2D22A.A1FE8E04B9D4=8

SQL Counts

Commit

The number of times the thread successfully concluded commit phase 2 processing.

Abort

A count of the number of times the thread has rolled back uncommitted data.

Select

The number of SQL SELECT requests.

Open Cursor

The number of SQL OPEN cursor statements issued by a thread.

Close Cursor

The number of SQL CLOSE cursor statements issued by a thread.

Fetch

The number of SQL FETCH requests.

Insert

The number of SQL INSERT statements executed by the thread.

Delete

The number of SQL DELETE statements issued by the thread.

Update

The number of SQL UPDATE statements executed by the thread.

Describe

The number of SQL DESCRIBE statements issued by the thread.

Lock Table

A count of the number of LOCK TABLE SQL statements issued by the application (not the total number of tables locked by the thread).

Prepare

The number of SQL PREPARE statements issued by a thread.

Create/Drop

The number of times DDL CREATE and DROP SQL requests were issued by the thread.

Alter

The number of times a thread issued the DB2 ALTER command to change some aspect of a DB2 object.

Grant/Revoke

The number of times SQL GRANT and REVOKE requests were issued from within a program.
Current SQL Counts

**Increm Bind**
A count of the number of times the plan active in the thread was rebound. PREPARES are not included. This value should be zero in a production environment. The plan can be rebound with VALIDATE(BIND) to prevent incremental binds.

**Label/Comm On**
The number of SQL LABEL ON and COMMENT ON statements issued by the thread.

**Set SQLID**
The number of SET SQLID requests issued by the thread.

**Set Connection**
The number of SET CONNECTION statements executed by the thread.

**Set Degree**
The number of SET CURRENT DEGREE statements executed by the thread.

**Release**
The number of RELEASE statements executed by the thread.

**Connect Type 1**
The number of CONNECT type 1 statements executed by the thread.

**Connect Type 2**
The number of CONNECT type 2 statements executed by the thread.

**Set Rules**
The number of SET CURRENT RULES statements executed by the thread. This field appears only for DB2 Version 4 and above.

RID Pool Information

**RID Pool Used**
The number of times the RID pool was used. The RID pool is used for list prefetch of a single index or multiple index access.

**RID Pool Use**
The number of times the RID pool could not be used because no storage was available for RIDs.

**RID Pool Use Failed/Max Limit**
The number of times the RID pool could not be used because the number of RIDs retrieved exceeded the maximum allowed.

I/O Parallelism

**Max Degree Parallel**
The maximum degree of I/O parallelism processed for the thread.

**Parallel Groups Executed**
The total number of I/O parallel groups executed for the thread.

**Parallel Failed/Cursor**
The total number of I/O parallel groups that fell back to sequential processing because cursor could be used for UPDATE or DELETE.

**Parallel Failed/No ESA Sort**
The total number of I/O parallel groups that fell back to sequential processing because there was no ESA sort support available.

**Parallel Failed/Buffers**
The total number of parallel groups that fell back to sequential processing because of storage shortage or buffer pool contention.

**Parallel Failed-No ESA Enclaves**
The total number of parallel groups that fell back to sequential processing because MVS/ESA enclave services were unavailable. This field appears only for DB2 Version 4 and above.
### Current SQL Counts

<table>
<thead>
<tr>
<th><strong>Thread Information</strong></th>
<th><strong>119</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current SQL Counts</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Parallelism</strong></td>
<td><strong>YES</strong> indicates that query parallelism is disabled by the Resource Limit Facility for at least one dynamic SQL SELECT statement. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td><strong>Parallel Degree</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Reduced/Buffers</strong></td>
<td>The total number of I/O parallel groups that were processed at a parallel degree less than planned because of storage shortage or buffer pool contention.</td>
</tr>
<tr>
<td><strong>Executed</strong></td>
<td>The total number of I/O parallel groups that were executed at the planned parallel degree.</td>
</tr>
</tbody>
</table>

### Stored Procedures

The following fields appear only for DB2 Version 4 and above.

<table>
<thead>
<tr>
<th><strong>SQL Call Statements</strong></th>
<th>The number of SQL CALL statements executed by the thread.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQL Calls Timed Out</strong></td>
<td>The number of times an SQL CALL timed out waiting to be scheduled. There was no available TCB in the stored procedures address space or the procedure was in the STOP ACTION(QUEUE) state.</td>
</tr>
<tr>
<td><strong>Stored Proc SQL Reqs</strong></td>
<td>The number of SQL requests issued from a DB2 stored procedure. This field requires class 2 accounting trace data. If this data is not available, N/A is displayed.</td>
</tr>
<tr>
<td><strong>SQL Calls Rejected</strong></td>
<td>The number of times an SQL CALL was rejected because the procedure was in the STOP ACTION(REJECT) state.</td>
</tr>
<tr>
<td><strong>Stored Procedures Abended</strong></td>
<td>The number of times a stored procedure terminated abnormally.</td>
</tr>
</tbody>
</table>
SQL Call Being Executed

The SQL Call Being Executed screen allows you to view the current SQL statement that a DB2 thread is executing. OMEGAMON II automatically determines whether the SQL statement is dynamic or static and displays appropriate text to that effect.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions of some of the fields displayed on this screen:

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
- **Package**: The DB2 package name of the active thread.
- **Collection**: The package collection identifier. This field appears only if a package is being used.

**Attachment Identifier**

This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
- **CICS**: The CICS jobname, task name, task number, terminal ID, and thread type.
  
  The thread type is:

  - **Pool**: The thread in use is a pool thread.
  - **Enty**: The thread in use is a nonprotected entry thread.
  - **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.
IMS  The IMS region number, transaction name, region name, and terminal ID (LTERM).

TSO  The TSO user ID and region ASID.

**Distributed Thread Identifier**

The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**

The distributed thread type.

**Distributed Allied**

A requesting thread; one that has issued an SQL call to a remote DB2 location.

**Database Access**

A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

luw-id=token

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

USCACO01.O2D22A.A1FE8E04B9D4=8

**SQL Call Information**

The information that OMEGAMON II displays in this area varies slightly, depending on whether the SQL call is active or not. If the call is active, OMEGAMON II displays the information described below with the actual text of the SQL call. If the call is not active, OMEGAMON II displays only the information described below.

**Thread Status**

The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.

**SQL Request Type**

The type of the SQL request: dynamic SQL or static SQL.

**Total SQL Reqs**

The total number of SQL requests issued by the thread.

**SQL Call Type**

The SQL call type of the currently or previously active SQL call. This is the specific activity that DB2 is performing. For example, a dynamic SQL call may indicate PREPARE, EXECUTE, or OPEN CURSOR even though the original SQL statement may have been an SQL SELECT. A static SQL call may indicate OPEN CURSOR, CLOSE CURSOR, or FETCH even though the originating SQL statement was an SQL DECLARE CURSOR.

**SQL DBRM Name**

The database request module name containing the active call. The DBRM name is usually set to the application program name. It helps you to locate the program that is issuing the call if diagnosis is necessary.
<table>
<thead>
<tr>
<th><strong>SQL Statement Number</strong></th>
<th>The DB2 precompiler statement number of the active SQL statement. The statement number, when used in conjunction with the DBRM name, allows you to easily locate the specific SQL call for diagnostic purposes.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collection ID</strong></td>
<td>The Collection ID of the currently executing statement. This field appears only if the currently executing statement is contained in a package.</td>
</tr>
</tbody>
</table>
The Thread Resource Limit Statistics screen displays information about the parameters that control and administer the thread resource limit facility (governor). This DB2 governor facility applies to dynamic SQL calls only.

**Highlighting**

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>ARCM</td>
<td>Backout requires an archive tape log mount.</td>
</tr>
<tr>
<td></td>
<td>GETP</td>
<td>The rate for getpages per read I/O is low.</td>
</tr>
<tr>
<td></td>
<td>INDB</td>
<td>The thread is indoubt and terminated.</td>
</tr>
<tr>
<td></td>
<td>PREF</td>
<td>The sequential prefetch rate is high.</td>
</tr>
<tr>
<td></td>
<td>RIO</td>
<td>The synchronous read I/O rate is high.</td>
</tr>
<tr>
<td></td>
<td>ETIM</td>
<td>This thread reached the elapsed time threshold value.</td>
</tr>
<tr>
<td></td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td>Resource Limit</td>
<td>RELM</td>
<td>The ratio of CPU consumption to the resource limit indicates a high resource usage.</td>
</tr>
<tr>
<td>High Water Mark (CPU)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions of some of the fields displayed on this screen:

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
Thread Resource Limit Statistics

Package
The DB2 package name of the active thread.

Collection
The package collection identifier. This field appears only if a package is being used.

Attachment Identifier
This information changes depending upon the type of connection:

Batch
The MVS jobname and ASID.

CICS
The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:

- **Pool**: The thread in use is a pool thread.
- **Enty**: The thread in use is a nonprotected entry thread.
- **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

IMS
The IMS region number, transaction name, region name, and terminal ID (LTERM).

TSO
The TSO user ID and region ASID.

Distributed Thread Identifier
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

Type
The distributed thread type.

- **Distributed Allied**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
- **Database Access**: A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

Luwid
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

- luw-id=token

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

- **USCACO01.O2D22A.A1FE8E04B9D4=8**
### Resource Limit Information

<table>
<thead>
<tr>
<th>Resource Limit Table Name in Use</th>
<th>The name of the DB2 resource limit specification table currently in use by the DB2 subsystem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Limit Origin</td>
<td>The hierarchical precedence (origin) of the resource limit in effect for this thread, if resource limiting is active. (IBM’s DB2 System and Database Administration Guide documents the hierarchical precedence.) The possible origins of the resource limit in effect for the thread are:</td>
</tr>
<tr>
<td>Auth/Plan</td>
<td>Table entry containing matching authid and plan name.</td>
</tr>
<tr>
<td>Authid</td>
<td>Table entry containing matching authid, and plan name was blank.</td>
</tr>
<tr>
<td>Planname</td>
<td>Table entry containing matching plan name, and authid was blank.</td>
</tr>
<tr>
<td>Blank Entry</td>
<td>Table entry containing blank plan name and authid.</td>
</tr>
<tr>
<td>Install</td>
<td>No table entry exists; the value in effect was determined from the RLFERR/RLFERRD parameter of the DSNZPARM module.</td>
</tr>
<tr>
<td>I/O Error</td>
<td>Resource limit table I/O error; the value in effect was determined from the RLFERR/RLFERRD parameter of the DSNZPARM module.</td>
</tr>
<tr>
<td>Sysadm/Sysopr</td>
<td>Table entry is install SYSADM or SYSOPR. No limits apply to these authorization groups.</td>
</tr>
<tr>
<td>Auth/Coll/Pkg</td>
<td>Table entry containing matching authid, collection and package.</td>
</tr>
<tr>
<td>Auth Any Pkg</td>
<td>Table entry containing matching authid and collection, and blank package.</td>
</tr>
<tr>
<td>Auth any Coll</td>
<td>Table entry containing matching authid and package, and blank collection.</td>
</tr>
<tr>
<td>Auth Any Pkg/Coll</td>
<td>Table entry containing matching authid and blank collection and package.</td>
</tr>
<tr>
<td>Any Auth/Pkg</td>
<td>Table entry containing matching collection and blank authid and package.</td>
</tr>
<tr>
<td>Any Auth/Coll</td>
<td>Table entry containing matching package and blank authid and collection.</td>
</tr>
<tr>
<td>Any Auth/Coll/Pkg</td>
<td>Table entry containing blank authid, collection and package.</td>
</tr>
</tbody>
</table>
### Resource Limit in Effect (SUs)

The resource limit in MVS service units for the thread. Express DB2 limits in service units. If the origin is Sysadm/Sysopr or the ASUTIME parameter is NULL, then no limits apply.

### Resource Limit CPU Time per SU

The number of CPU seconds per service unit. The number of CPU seconds per service unit is dependent upon the CPU model in use. This is helpful in understanding the actual amount of CPU time allowed by the resource limit specified (in SUs). This value is expressed in seconds.

### Resource Limit in Effect (CPU secs)

The resource limit in effect in CPU seconds. This is the actual amount of CPU time allowed, based on the service units limit specified in the DB2 resource limit table. This value is expressed in seconds. If the origin is Sysadm/Sysopr or the ASUTIME parameter is NULL, then no limits apply.

### Resource Limit High Water Mark (CPU)

The highest amount of CPU time used for a single dynamic request since thread creation. This value is expressed in seconds. This value can be higher than the value of Resource Limit in Effect (CPU secs) because of the logic for checking the high water mark of the DB2 subsystem. This field will display a high water mark value even if the thread is not governed by the Resource Limit Facility. (In that case, the Ratio of HWM to Resource Limit will be **No Limit**.)

### Ratio of HWM to Resource Limit (CPU)

The ratio/percentage of the CPU high water mark to the CPU resource limit in effect. This value can be higher than 100% because of the logic for checking the high water mark of the DB2 subsystem.
Distributed Thread Detail (VTAM and TCP/IP Connections)

The Distributed Thread Detail screen provides information about an individual distributed thread's VTAM APPC conversations and TCP/IP conversations in addition to statistics about the thread's distributed activity.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are explanations for some of the fields on this screen:

**Thread Identifier**

OMEGAMON II uses the following fields to identify the thread to which the information on this screen applies.

- **Plan**
  - The DB2 plan name of the active thread.
- **Connid**
  - The DB2 connection identifier of the active thread.
- **Corrid**
  - The DB2 correlation identifier of the active thread.
- **Authid**
  - The DB2 authorization identifier of the active thread.
- **Package**
  - The DB2 package name of the active thread.
- **Collection**
  - The package collection identifier. This field appears only if a package is being used.

**Attachment Identifier**

This field changes depending upon the type of connection:

- **Batch**
  - The MVS jobname and ASID.
- **CICS**
  - The CICS jobname, task name, task number, thread type, and terminal ID.
  - The thread type is:
    - **Pool**
      - The thread in use is a pool thread.
    - **Enty**
      - The thread in use is a nonprotected entry thread.
    - **Prot**
      - The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.
Distributed Thread Detail (VTAM and TCP/IP Connections)

**IMS**
The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**
The TSO user ID and ASID.

**Note:** When distributed thread detail appears, attach information will be displayed only when the thread is a distributed allied thread (not for distributed database access threads).

**Distributed Thread Identifier**
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**
The distributed thread type.

- **Distributed Allied**
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**
  A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**Conversation Information**
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem. One line of output appears for each active conversation.

**VTAM Luname**
The VTAM logical unit name of the remote DB2 subsystem that is the partner on this VTAM APPC conversation.

**VTAM Modename**
The VTAM logmode in use by the APPC conversation. For database access threads, the logmode name exists and originates on the MVS system of the remote requester.

**Last VTAM APPC Req**
The most recent VTAM APPC request that was issued on the conversation.

**Last VTAM APPC Qual**
The most recent VTAM APPC qualifier that was issued on the conversation.

**Time Since Last Req**
The amount of time that has elapsed since the last APPC command was issued on the conversation.
**Distributed Thread Detail (VTAM and TCP/IP Connections)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conv Status</strong></td>
<td>The status of the conversation.</td>
</tr>
<tr>
<td><strong>WAIT-VTAM</strong></td>
<td>The conversation is suspended and waiting for a VTAM response.</td>
</tr>
<tr>
<td><strong>IN-VTAM</strong></td>
<td>The conversation is active within VTAM.</td>
</tr>
<tr>
<td><strong>NOT-ACTIVE</strong></td>
<td>The conversation is inactive—neither waiting for a VTAM response nor active in VTAM.</td>
</tr>
<tr>
<td><strong>VTAM Session ID</strong></td>
<td>The VTAM session identifier in use by the conversation.</td>
</tr>
<tr>
<td><strong>Remote Location Name</strong></td>
<td>The name of a remote location with which the local DB2 has communicated.</td>
</tr>
<tr>
<td><strong>Remote Location Luname</strong></td>
<td>The logical unit name of the location specified in the Remote Location Name field.</td>
</tr>
<tr>
<td><strong>Protocol Used</strong></td>
<td>The type of distributed protocol being used. The values are SYSTEM, APPLICATION, or BOTH, depending on whether system directed access, application directed access, or both are being used.</td>
</tr>
<tr>
<td><strong>Conversations Queued</strong></td>
<td>The number of conversation requests queued by DDF waiting for allocation.</td>
</tr>
<tr>
<td><strong>Block Mode Switches</strong></td>
<td>The number of times a switch was made from continuous block mode to limited block mode.</td>
</tr>
<tr>
<td><strong>Message Buffer Rows</strong></td>
<td>The number of rows in the message buffer if block fetch is being used.</td>
</tr>
<tr>
<td><strong>Bind Remote Access</strong></td>
<td>The number of SQL statements that were bound for remote access.</td>
</tr>
<tr>
<td><strong>Max Allocated Conv</strong></td>
<td>The maximum number of conversations that were allocated at the same time.</td>
</tr>
<tr>
<td><strong>Conv Allocated</strong></td>
<td>The number of conversations successfully allocated.</td>
</tr>
<tr>
<td><strong>Conv Deallocated</strong></td>
<td>The number of conversations deallocated.</td>
</tr>
<tr>
<td><strong>Indoubt/Remote</strong></td>
<td>The number of threads that went indoubt with the remote location as coordinator.</td>
</tr>
<tr>
<td><strong>Commit/Remote</strong></td>
<td>The number of commit operations performed with the remote location as coordinator.</td>
</tr>
<tr>
<td><strong>Rollback/Remote</strong></td>
<td>The number of rollback operations performed with the remote location as the coordinator.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Remote CPU Time</td>
<td>The amount of CPU time that has been used in processing the thread's SQL requests at the remote location since thread creation or DB2 signon. This field appears only for distributed allied threads. This field applies only to system directed access (private protocols). If application directed access (DRDA protocols) is used, this field will be 0.</td>
</tr>
<tr>
<td>Dist Local Elapsed</td>
<td>The amount of time the thread has spent waiting for a response to a remote SQL request (includes remote DB2 processing time, VTAM processing time, and network time). The time is calculated from the point of thread creation (or DB2 signon if the thread is reused). This field is displayed only for distributed allied threads.</td>
</tr>
<tr>
<td>Dist Remote Elapsed</td>
<td>The amount of time that has been used in processing the thread's SQL requests at the remote location since thread creation or DB2 signon. This field appears only for distributed allied threads. This field applies only to system directed access (private protocols). If application directed access (DRDA protocols) is used, this field will be 0.</td>
</tr>
<tr>
<td>Tran Sent/Recv</td>
<td>The number of transactions migrated to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>SQL Sent/Recv</td>
<td>The number of SQL calls sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Row Sent/Recv</td>
<td>The number of rows sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Message Sent/Recv</td>
<td>The number of VTAM messages sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Byte Sent/Recv</td>
<td>The number of bytes sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Commit Sent/Recv</td>
<td>The number of commits sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Abort Sent/Recv</td>
<td>The number of aborts sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Conv Sent/Recv</td>
<td>The number of conversations sent to and from the remote location since thread creation or DB2 signon.</td>
</tr>
<tr>
<td>Block Sent/Recv</td>
<td>The number of blocks sent and received using block fetch.</td>
</tr>
<tr>
<td>Prepare Sent/Recv</td>
<td>The number of prepare requests sent to the participant and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Last Agent Sent/Recv</td>
<td>The number of last agent requests sent to the participant and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>2-Phase Commit Sent/Recv</td>
<td>The number of commit requests sent to the participant and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Backout Sent/Recv</td>
<td>The number of backout requests sent to the participant and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Forget Sent/Recv</td>
<td>The number of forget requests sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Thread Information</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>Distributed Thread Detail (VTAM and TCP/IP Connections)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Commit Response Sent/Recv</strong></td>
<td>The number of request commit responses sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td><strong>Backout Response</strong></td>
<td>The number of backout responses sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
</tbody>
</table>
Current Parallel Task Summary

The Current Parallel Task Summary screen provides information about the activity of parallel tasks that are executing on behalf of a thread. Parallel tasks are created when CPU parallelism is selected as the method for processing an SQL query. Internally, parallel tasks appear as DB2 system threads. This panel is available only for DB2 Version 4 and above.

Highlighting

OMEGAMON II does not highlight any fields on the Current Parallel Task Summary screen.

Navigation

For more information about

- a particular parallel task, move the cursor to the task information line and press the zoom key (PF11). The Thread Detail appears (for that parallel task).
- exceptions that have tripped, type E.A on the top line of the screen.
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions of some of the fields displayed on this screen:

- **Elapsed**: The time elapsed since the parallel task was created. When the task's elapsed time exceeds 24 hours, the format is **DD-HH:MM**.
- **CPU Time**: The CPU time for the parallel task.
- **Status**: The current DB2 status of the parallel task. See “DB2 Thread Status” on page 619 for definitions of all possible status values.
- **GetPg**: The number of getpage requests for the parallel task. Getpage requests are logical read requests that may not actually result in physical I/O if the page requested is currently in the buffer pool. DB2 resets this count at create thread and signon.
- **Read I/O**: The number of synchronous read I/O requests.
- **Pfetch**: The number of sequential/list/dynamic prefetch requests.
- **Waits**: The total number of times that the parallel task had to wait for a class 3 event to complete. N/A appears if accounting class 3 is not active.
- **Wait Time**: The total elapsed time that the parallel task had to wait for a class 3 event to complete.
Utility Detail Information

The Utility Detail Information screen provides detailed information about the activity of an individual utility. This information includes the relative utility statement position, the contents of the currently executing utility statement, and data specific to a particular utility. This screen does not apply to utilities that have been started but have not yet completed running due to abnormal termination.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

*Thread Identifier*

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

*Attachment Identifier*

This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
- **CICS**: The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:
  - **Pool**: The thread in use is a pool thread.
  - **Enty**: The thread in use is a nonprotected entry thread.
  - **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.
- **IMS**: The IMS region number, transaction name, region name, and terminal ID (LTERM).
## Utility Detail Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TSO</strong></td>
<td>The TSO user ID and region ASID.</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td>The name of the IMS control or dependent region.</td>
</tr>
</tbody>
</table>

### Utility Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility</td>
<td>The name of the DB2 utility.</td>
</tr>
<tr>
<td>UtilID</td>
<td>The identifier that defines the utility to DB2. Each utility that has been started and is not yet terminated must have a unique utility ID.</td>
</tr>
<tr>
<td>UserID</td>
<td>The authorization ID of the invoker of the DB2 utility.</td>
</tr>
<tr>
<td>Phase</td>
<td>The executing phase of the DB2 utility.</td>
</tr>
<tr>
<td>Count</td>
<td>The total number of items (such as records or pages) that have been processed. The type of item depends on the utility and its phase. For more information about this field, refer to the Utilities section of IBM DATABASE2 Command and Utility Reference.</td>
</tr>
<tr>
<td>Share Level</td>
<td>The share level of the tablespace accessed by utilities. The share level can be exclusive control, share read access, or share write access.</td>
</tr>
<tr>
<td>Output dataset</td>
<td>The name of the output dataset currently in use. If the utility is not MERGECOPY or COPY, this field is not displayed.</td>
</tr>
<tr>
<td>Input dataset</td>
<td>The name of the input dataset currently referenced by the utility. If the utility is not LOAD, this field is not displayed.</td>
</tr>
<tr>
<td>Loading data records into table</td>
<td>The name of the table into which the data records are being loaded. If the utility is not LOAD, this field is not displayed.</td>
</tr>
<tr>
<td>Current utility statement in SYSIN</td>
<td>The utility statement that is currently in execution.</td>
</tr>
<tr>
<td>Utility statement</td>
<td>The contents of the executing utility statement.</td>
</tr>
</tbody>
</table>
The Stopped Utility Detail Information screen provides detailed information about the utility that has been started but has not yet completed running due to abnormal termination.

You can reach this screen in two ways: (1) from the Utility Summary screen by zooming on a utility whose status is UTIL-STOP, or (2) by zooming from thread exception UTIS.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen:

- **Thread Identifier**
  OMEGAMON II identifies the thread to which the information on this screen applies.
- **Plan**
  The plan name of the stopped utility. It is always DSNUTIL.
- **Connid**
  The connection identifier of the invoker of the stopped utility. It is always UTILITY.
- **Corrid**
  The correlation identifier of the invoker of the stopped utility.
- **Authid**
  The authorization identifier of the invoker of the stopped utility.
- **JOB Name**
  The job name of the stopped utility.
- **UserID**
  The authorization identifier of the invoker of the stopped utility.
- **Utility Information**
  - **Utility**
    The name of the DB2 utility.
  - **UtilID**
    The identifier that defines the utility to DB2. Each utility that has been started and is not yet terminated must have a unique utility ID.
  - **Phase**
    The executing phase of the DB2 utility.
| **Count** | The total number of items (such as records or pages) that have been processed. The type of item depends on the utility and its phase. For more information about this field, refer to the Utilities section of IBM DATABASE2 Command and Utility Reference. |
| **Current utility statement in SYSIN** | The utility statement that is currently in execution. |
IMS Connection Detail Information

The IMS Connection Detail Information screen provides information about the IMS control region and all dependent regions active with DB2, including the IMS region type, the program name active in the region, the contents of the subsystem member (SSM) and the status of the dependent region. (This screen does not apply to DLIBATCH jobs.)

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- the thread, move the cursor to the dependent region name and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>The name of the IMS control or dependent region.</td>
</tr>
<tr>
<td>Type</td>
<td>The IMS region type:</td>
</tr>
<tr>
<td>BMP</td>
<td>Message-driven batch region</td>
</tr>
<tr>
<td>CNTL</td>
<td>Control region</td>
</tr>
<tr>
<td>FP</td>
<td>Fast Path region</td>
</tr>
<tr>
<td>MPP</td>
<td>Message processing region</td>
</tr>
<tr>
<td>CRC</td>
<td>The command recognition character used to pass commands to the external subsystem.</td>
</tr>
<tr>
<td>LIT</td>
<td>The name of the language interface token.</td>
</tr>
<tr>
<td>RTT</td>
<td>The name of the resource translation table. This table maps the IMS application names into DB2 plan names. If this entry is omitted, the DB2 plan name is the IMS application program name.</td>
</tr>
<tr>
<td>Module</td>
<td>The name of the interface control module</td>
</tr>
<tr>
<td>Err</td>
<td>The type of error option specification in use. For a complete list of the error options, see the IBM DB2 System and Database Administration Guide.</td>
</tr>
<tr>
<td>PSB</td>
<td>The PSB name active in the IMS dependent region. This field applies only to dependent regions (not to the control region).</td>
</tr>
<tr>
<td>Status</td>
<td>The current DB2 status of the thread. See “DB2 Thread Status” on page 619 for definitions of all possible status values.</td>
</tr>
</tbody>
</table>
CICS RCT Summary

The CICS RCT Summary screen provides summary information about the CICS-DB2 connection, as defined in the CICS resource control table (RCT).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- an RCT entry definition, move the cursor to one of the lines under TXID and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

- **CICS**
  - The CICS jobname. If you enter a different jobname, the corresponding RCT summary information will appear.

- **DSNCRCT Name**
  - The RCT name in use by the CICS jobname.

- **Statistics Dest**
  - The transient data destination used for the shutdown statistics when the attachment facility is stopped.

- **Error MSG DEST id**
  - The identifier of the DFHDCT destination for unsolicited error messages.
  - As many as three destination IDs can be assigned.

- **SNAP SYSOUT Class**
  - The MVS dump output class used to take a SNAP dump if a thread subtask fails.

- **CICS Auth Name**
  - The authorization ID used when the attachment connects to DB2.

- **THRD Purge Time Interval**
  - The number of seconds that a nonprotected thread can be inactive before CICS terminates the thread.

- **Traceid 1**
  - The CICS user trace identifier used by the attachment facility when it traces calls to DB2.

- **Maximum Threads**
  - The maximum number of threads that can be created between CICS and DB2 within this RCT.

- **Active MVS Subtasks**
  - The number of MVS TCBs that will be attached when the attach facility is started.

- **Traceid 3**
  - The dynamic plan exit trace ID.
### CICS RCT Summary

The following fields will appear for each command, entry, and pool RCT definition that exists within the resource control table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TXID</td>
<td>The identifier of the transaction or transaction group for which you want to display statistical information. Use this field to reduce the number of lines displayed at the bottom of the screen. When there are multiple transactions with the same RCT definition, this field will display the ID of the first transaction.</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>The name of the specific plan for which you want to display statistical information. Use this field to reduce the number of lines displayed at the bottom of the screen.</td>
</tr>
<tr>
<td>CALLS</td>
<td>The number of DB2 calls generated by transactions that share an RCT definition since the attach facility was started.</td>
</tr>
<tr>
<td>WAITS</td>
<td>The number of DB2 waits experienced by transactions that share an RCT definition since the attach facility was started.</td>
</tr>
<tr>
<td>ABORTS</td>
<td>The number of aborts experienced by transactions that share an RCT definition since the attach facility was started.</td>
</tr>
<tr>
<td>THRDM</td>
<td>The maximum number to which THRDA can be dynamically set for this RCT definition.</td>
</tr>
<tr>
<td>THRDA</td>
<td>The maximum number of active threads for this RCT entry.</td>
</tr>
<tr>
<td>THRDS</td>
<td>The number of MVS TCBs that will be attached (for use by the RCT definition) to the transaction(s) when the attach facility is started.</td>
</tr>
<tr>
<td>TCB TIME</td>
<td>The amount of CPU time (in seconds) used by transactions originating from this RCT definition.</td>
</tr>
</tbody>
</table>
The CICS RCT Detail screen provides information about the RCT entry definition selected from the CICS RCT Summary screen. The output includes RCT entry parameters in use, thread information, and miscellaneous statistics.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CICS</td>
<td>The CICS jobname.</td>
</tr>
<tr>
<td>Transaction ID</td>
<td>The transaction IDs of all CICS transactions that are defined in the RCT entry definition being viewed.</td>
</tr>
<tr>
<td>Entry Type</td>
<td>The type of thread to be used by the transaction(s).</td>
</tr>
<tr>
<td></td>
<td><strong>Comd</strong> Threads that are reserved for commands.</td>
</tr>
<tr>
<td></td>
<td><strong>Pool</strong> Threads that belong to a pool.</td>
</tr>
<tr>
<td></td>
<td><strong>Entry</strong> Nonprotected/protected entry threads.</td>
</tr>
<tr>
<td>Plan Name</td>
<td>The name of the plan assigned to the transaction(s).</td>
</tr>
<tr>
<td>Thread TCB Prty</td>
<td>The MVS dispatching priority of thread TCBs relative to the CICS main TCB. Possible values: High or Low.</td>
</tr>
<tr>
<td>Plan Alloc Exit</td>
<td>The name of the exit program that can dynamically allocate the planname for the transaction ID when the first SQL call is issued.</td>
</tr>
<tr>
<td>Rollback on Deadlok</td>
<td>Determines whether or not CICS will issue a syncpoint rollback when the transaction experiences an IRLM-detected deadlock or timeout.</td>
</tr>
<tr>
<td>Yes</td>
<td>CICS will roll back all DB2 work and all CICS-protected resources to the last syncpoint.</td>
</tr>
<tr>
<td>No</td>
<td>CICS will roll back only the incomplete SQL call that was involved in the deadlock/timeout.</td>
</tr>
</tbody>
</table>
**Thread Wait**
The action to take if no thread is available to execute a DB2-CICS transaction.

- **Pool**: If all threads are in use, DB2 will place this transaction in the pool; if all the pool threads are in use, DB2 will place this transaction in a queue.
- **Yes**: If all threads are in use, the transaction will wait until a thread is available.
- **No**: If all threads are in use, the transaction will abend.

**THRDM**
The maximum number to which THRDA can be dynamically set for this RCT definition.

**THRDA**
The maximum number of active threads for this RCT entry.

**THRDS**
The number of MVS TCBs that will be defined to the transaction(s) when the attach facility is started.

**Authorization Opt.**
The type of authorization ID required to execute the DB2 plan for transaction(s) originating from the RCT definition.

- **Userid**: The user’s sign-on ID (8 bytes)
- **User**: A sign-on operator ID (3 bytes)
- **Term**: The terminal ID.
- **Txid**: The transaction ID
- **xxxxxx**: A character string
- *****: Indicates a null value
### Statistics Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Count of Calls</strong></td>
<td>The number of DB2 calls generated by the transaction(s) since the CICS-DB2 attach was started.</td>
</tr>
<tr>
<td><strong>Current Threads Active</strong></td>
<td>The number of active threads that are currently being used by the transaction(s).</td>
</tr>
<tr>
<td><strong>Count of Commits</strong></td>
<td>The number of commits completed since the attach facility was started.</td>
</tr>
<tr>
<td><strong>Current TCBs Active</strong></td>
<td>The number of currently active threads.</td>
</tr>
<tr>
<td><strong>Count of Authorizations</strong></td>
<td>The number of times authorization has been invoked for the threads defined to the transaction(s).</td>
</tr>
<tr>
<td><strong>Current Total TCB Time</strong></td>
<td>The amount of CPU time (in seconds) that has been used by currently active threads.</td>
</tr>
<tr>
<td><strong>Count of Aborts</strong></td>
<td>The number of aborts experienced by the transaction(s) since the attach facility was started.</td>
</tr>
<tr>
<td><strong>Current Waits/Ovflw Pool</strong></td>
<td>The number of transactions that are waiting for a thread, or that have overflowed into the pool. This condition depends on the setting of the Thread Wait (TWAIT) field.</td>
</tr>
<tr>
<td><strong>Count of RO Commits</strong></td>
<td>The number of read-only commits since the attach facility was started.</td>
</tr>
<tr>
<td><strong>Highwater Threads Used</strong></td>
<td>The largest number of concurrent threads in use since the attach facility was started.</td>
</tr>
<tr>
<td><strong>Count of Waits/Ovflw Pool</strong></td>
<td>The number of times that all available threads for the entry were busy, and the transaction had to wait or be diverted to the pool (depending on the setting of Thread Wait).</td>
</tr>
</tbody>
</table>
Thread Group Buffer Pool Activity

The Thread Group Buffer Pool Activity screen provides a summary of group buffer pool usage for an individual thread. This screen is available for DB2 Version 4 only when data sharing is active.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as other thread detail screens.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

**Thread Identifier**

OMEGAMON II uses the following fields to identify the thread to which the information on this screen applies:

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

**Attachment Identifier**

This field changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
Thread Group Buffer Pool Activity

**CICS**
The CICS jobname, task name, task number, thread type, and terminal ID. The thread type is:

- **Pool** The thread in use is a pool thread.
- **Enty** The thread in use is a nonprotected entry thread.
- **Prot** The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

**IMS**
The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**
The TSO user ID and region ASID.

**System**
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

**Distributed Thread Identifier**
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

- **Type** The distributed thread type.
  - **Distributed Allied** A requesting thread; one that has issued an SQL call to a remote DB2 location.
  - **Database Access** A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the *Luwid* field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**System**
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

---

**Group Buffer Pool Information**

**Group Buffer Pool** The group buffer pool ID.

**Reads** - The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where the data was found and returned to the member.

**Cross-Invalidation:** Data Returned
Thread Group Buffer Pool Activity

Reads - Page Not Found: Data Returned
The number of reads to the group buffer pool required because the page was not in the member's buffer pool, where the data was found and returned to the member.

Reads - Cross-Invalidation: Data not in GBP-R/W Int
The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where
- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.

Reads - Page Not Found: Data not in GBP-R/W Int
The number of reads to the group buffer pool required because the page was not in the member's buffer pool, where
- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.

Reads - Cross-Invalidation: Data not in GBP-No R/W Int
The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where
- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- no other member had read/write interest in the pageset, so DB2 did not have to register the page, since another member cannot cause a cross-invalidation by updating a page.

Reads - Page Not Found: Data not in GBP-No R/W Int
The number of reads to the group buffer pool required because the page was not in the member's buffer pool, where
- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- no other member had read/write interest in the pageset, so DB2 did not have to register the page, since another member cannot cause a cross-invalidation by updating a page.

Read Hit Percentage
The percentage of all reads to the group buffer pool for which the needed data was found and returned to the member.

Read-to-Write Percentage
The ratio of reads to writes expressed as a percentage for the group buffer pool.

Changed Pages Written
The number of changed pages written to the group buffer pool. Pages can be forced out before the application commits if a buffer pool threshold is reached, or when P-lock negotiation forces the pages on the vertical deferred write queue to be written to the group buffer pool.

Clean Pages Written
The number of clean pages written to the group buffer pool. DB2 writes clean pages for pagesets and partitions defined with GBPCACHE ALL.
Cancel Thread

The Cancel Thread screen allows you to cancel an individual DB2 thread. For DB2 Version 3 and below, the cancel facility is available only for distributed threads.

Highlighting

OMEGAMON II highlights some fields on this screen to advise you that an exception exceeded its threshold value:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as other thread detail screens.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

**Thread Identifier**

OMEGAMON II uses the following fields to identify the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

**Attachment Identifier**

This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
<table>
<thead>
<tr>
<th><strong>CICS</strong></th>
<th>The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pool</strong></td>
<td>The thread in use is a pool thread.</td>
</tr>
<tr>
<td><strong>Enty</strong></td>
<td>The thread in use is a nonprotected entry thread.</td>
</tr>
<tr>
<td><strong>Prot</strong></td>
<td>The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.</td>
</tr>
</tbody>
</table>

| **IMS** | The IMS region number, transaction name, region name, and terminal ID (LTERM). |
| **TSO** | The TSO user ID and region ASID. |
| **System** | The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread. |

**Distributed Thread Identifier**
The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

<table>
<thead>
<tr>
<th><strong>Type</strong></th>
<th>The distributed thread type.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distributed Allied</strong></td>
<td>A requesting thread; one that has issued an SQL call to a remote DB2 location.</td>
</tr>
<tr>
<td><strong>Database Access</strong></td>
<td>A responding thread; one that is serving a remote DB2 location by responding to an SQL call.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Luwid</strong></th>
<th>This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:</th>
</tr>
</thead>
<tbody>
<tr>
<td>luw-id=token</td>
<td>The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:</td>
</tr>
<tr>
<td>USCACO01.O2D22A.A1FE8E04B9D4=8</td>
<td></td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.</td>
</tr>
</tbody>
</table>
Cancel Thread

Cancel Fields

CANCEL
The type of cancel command to be performed. The following values can be specified:

- **TOKEN** The token shown will be used to issue the cancel command:
  - CANCEL THREAD(token) for DB2 Version 4 and above.
  - CANCEL DDF THREAD(token) for DB2 Version 3.

- **LUWID** The luwid shown will be used to issue the cancel command:
  - CANCEL DDF THREAD(luwid) for all DB2 releases.

**Token**
The token of the specific thread to be cancelled. It is unique for the DB2 subsystem.

**Luwid**
The logical unit of work identifier of the thread to be cancelled. Two or more distributed threads can have the same luwid.
Objects Used By Thread

The Objects Used By Thread screen displays getpage and I/O activity for the DB2 objects used by the selected thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

**Thread Identifier**

OMEGAMON II uses the following fields to identify the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

**Attachment Identifier**

This information changes depending upon the type of connection:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch</strong></td>
<td>The MVS jobname and ASID.</td>
</tr>
<tr>
<td><strong>CICS</strong></td>
<td>The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:</td>
</tr>
<tr>
<td><strong>Pool</strong></td>
<td>The thread in use is a pool thread.</td>
</tr>
<tr>
<td><strong>Enty</strong></td>
<td>The thread in use is a nonprotected entry thread.</td>
</tr>
<tr>
<td><strong>Prot</strong></td>
<td>The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.</td>
</tr>
<tr>
<td><strong>IMS</strong></td>
<td>The IMS region number, transaction name, region name, and terminal ID (LTERM).</td>
</tr>
</tbody>
</table>
Objects Used By Thread

<table>
<thead>
<tr>
<th>Object</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TSO</strong></td>
<td>The TSO user ID and region ASID.</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.</td>
</tr>
<tr>
<td><strong>Database</strong></td>
<td>The name of the database for which thread activity has occurred.</td>
</tr>
<tr>
<td><strong>Spacename</strong></td>
<td>The name of the space for which thread activity has occurred.</td>
</tr>
<tr>
<td><strong>Dsn</strong></td>
<td>The sequence number of the dataset for which thread activity has occurred.</td>
</tr>
<tr>
<td><strong>Volume</strong></td>
<td>The name of the volume that contains the DB2 object.</td>
</tr>
<tr>
<td><strong>Getpage</strong></td>
<td>The number of getpage requests made by the thread.</td>
</tr>
<tr>
<td><strong>Sync Read</strong></td>
<td>The number of synchronous reads made by the thread.</td>
</tr>
<tr>
<td><strong>Sequential Prefetch</strong></td>
<td>The number of sequential prefetch read I/Os made by the thread.</td>
</tr>
<tr>
<td><strong>List Prefetch</strong></td>
<td>The number of list prefetch read I/Os made by the thread.</td>
</tr>
<tr>
<td><strong>Dynamic Prefetch</strong></td>
<td>The number of dynamic prefetch read I/Os made by the thread.</td>
</tr>
</tbody>
</table>
Threads with an Associated Enclave Token

The enclave token is associated with an individual thread. In DB2, stored procedure and DDF threads are classified into a Workload Manager (WLM) service class and assigned an enclave token. Once the thread has been associated with a service class, it then begins to receive resources according to the service class periods defined for the service class.

WLM makes “give” and “take” decisions about resources according to two things:

1. the defined importance for the service class period.
   - 1-very high
   - 2- high
   - 3-medium
   - 4-low
   - 5-very low

2. the computed performance index (PI) for the service class period.
   - <1-exceeding goal performance
   - =1-exactly meeting goal performance
   - >1-not meeting goal performance

The service class periods that have low importance and a low number for PI are likely to be considered as “DONORS” for WLM resources on a heavily loaded system.

This screen provides an overview of the activity of all threads connected to DB2 having an associated ENCLAVE token.

Each row displays information about an individual thread. The columns are ordered by Thread Elapsed Time (total time since thread creation or reuse), and includes information about the Elapsed Time, Plan Name, Jobname, AuthID, CPU%, Performance Index for the Service Class Period, Service Class Name, Service Class Period Number and Thread Status.

Highlighting

Highlighted fields indicate that exceptions related to those fields have tripped. To determine which exceptions have tripped, type E.A on the top line of the screen to display the Exception Messages for Thread Exceptions screen.

Navigation

To view detailed information about a thread, place the cursor anywhere on the data for that thread and press PF11. This will display the Enclave Detail screen. To return to the Enclave Summary screen, press PF3.

To view other available information about the thread, type the corresponding option letter on the top line and press ENTER.
Threads with an Associated Enclave Token

Fields

Here are descriptions for some of the fields displayed on this screen:

Elapsed: The elapsed time since thread creation, or since DB2 signon if the thread is reused.

Plan: The DB2 Plan name of the active thread.

Jobname: The name of the active job. For Distributed threads, this column may contain other identifying data, such as an executable program name.

AuthID: The User Identifier used to connect to the DB2 system.

CPU: The CPU percentage being consumed by this thread.

P/I: The computed Performance Index for the Service Class Period. "N/A" in compatibility mode.

SvcClass: The Service Class name the enclave work has been classified into. "N/A" in compatibility mode.

Pd#: The Service Class Period Number for the enclave. "N/A" in Compatibility mode.

Status: The current DB2 status of the thread.

*: A '*' will be displayed after the elapsed time field if the thread represents a parallel task initiated on behalf of another thread for CPU parallelism.

X: An 'X' will be displayed after the elapsed time field if the thread represents a parallel task initiated on behalf of another thread on another DB2 for SYSPLEX parallelism.

P: A 'P' will be displayed after the elapsed time field if the thread is the Parent of parallel tasks created to process a query request. Any activity performed on this thread's behalf by the parallel tasks will not be included in this thread.

These screens provide detailed information about the attributes of a thread running under an individual enclave. This information includes the information provided by the PLAN major command. It also provides information provided by the "enc" minor command.

The first few lines of output on the display identify the thread. This information is issued by the PLAN major command. The help panel for the ZTDTL screen contains detailed information about this display.

The data displayed by the "enc" minor command is detailed below.

*Note:* Refer to IBM publications: "MVS Planning: Workload Management" and "DB2 UDB Administration Guide" for more information.
Threads with an Associated Enclave Token

Fields

Here are descriptions for some of the fields displayed on this screen:

**Enclave Token**
This is the hexadecimal representation of an eight-byte field. An enclave is an anchor for a transaction that can be spread across multiple dispatchable units in multiple address spaces.

**Enclave Type**
- Dependent - The enclave was created via IWMECREA and is a continuation of the transaction for the owning address space.
- Original Independent - The enclave was created via IWMECREA and is an independent transaction.
- Foreign Independent - The enclave was created via IWMIIMP and is a continuation of an independent enclave on another system.
- Foreign Dependent - The enclave was created via IWMIIMP and is a continuation of a dependent enclave on another system.
- Inactive Enclave - The enclave is currently on an inactive enclave queue because SRM did not find any workunit associated with the enclave. The enclave will move back to the active queue once a workunit joins the enclave.

**Owning System**
The originating system for the enclave.

**Owning Job**
The originating jobname for the enclave.

**WLM Mode**
- Goal - Workload manager is monitoring and classifying work. It is periodically adjusting dispatching priorities to meet the service policies (Goals) associated with that work.
- Compatibility - Workload manager is monitoring and classifying work. However the dispatching priorities are set according to values in IEAIPSxx member of SYS1.PARMLIB.

**Enclave CPU Time**
Total CPU time associated with the Enclave.

**Service period information**

*Note: Please refer to the chapter titled "Defining Service Classes and Performance Goals" in "MVS Planning: Workload Management".*

**Service Period(s) This Class**
A one character number ranging from 1 to 8. This is the number of service periods which have been defined for this service class.

**Current Period for This Thread**
A one character number ranging from 1 to 8. This is the current service period definition which is controlling the work.
**Threads with an Associated Enclave Token**

A number computed to two decimal places.

A Performance Index less than one is an indication that the goal for this service class period is being exceeded. The service class period may be considered as a "donor", giving up CPU or pageable storage for other more important service class periods on the system.

A Performance Index greater than one is an indication that the goal for this service class period is not being met. Depending on the importance, this service class period may be considered for additional services to meet the defined goal.

**Period Number**
- A one character column ranging from 1 to 8.

**Importance**
- A one character column ranging from 1 to 5. The importance level 1 is most important. This indicates to WLM how important it is to meet this performance period goal.

**Duration in Service Units**
- A numeric column. All defined periods except the last period have a duration. The duration is expressed in service units so as to be portable among different processor speeds. Once the work has used the service units defined for that period, WLM switches to the goals defined in the next period.

**Percentile**
- A numeric percentage column. This column is only valid for a percentile response time goal.

**Response Time Goal or Velocity %**
- A numeric column. This column is only valid for percentile response time goals, average response time goals or velocity goals. For response time goals, this is the time value. For Velocity goals, this is the acceptable amount of delay for work when work is ready to run.

**Response Time Unit**
- A character column. This column contains the time unit that the response time goals are expressed in. Possible values are blank, Millisecs, Seconds, Minutes and Hours.

**Goal Description**
- A character column. This column describes the type of goal set for this service period. Possible values are:
  - Percentile response time goal
  - Average response time goal
  - Velocity goal
  - Discretionary goal
  - System goal

---

**Service class information**

*Note: Please refer to the chapter titled "Defining Service Classes and Performance Goals" in "MVS Planning: Workload Management".*

**CPU Critical**
- A "Yes" or "No" value indicating whether long term CPU protection is assigned to this class.

**Storage Protection**
- A "Yes" or "No" value indicating whether long term storage protection is assigned to this class.
### Service Class Name
An eight character name for a group of work within a workload having similar performance characteristics.

### Service Class Description
A thirty-two character field describing the service class.

### Workload Name
An eight character field containing the name of the workload this service class is associated with.

### Workload Description
A thirty-two character field describing the workload with which this service class is associated.

### Resource Group Name
An eight character field containing the name of the resource group this service class is associated with.

### Resource Group Description
A thirty-two character field describing the resource group this service class is associated with.

### Report Class Name
An eight character field containing the name of the report class this Service Class is associated with.

### Report Class Description
A thirty-two character field describing the report class this Service Class is associated with.

---

**WLM application environment**

*Please review the topic “Assigning procedures and functions to WLM application environments” in the DB2 Administration Guide.*

### Application Environment Name
A thirty-two character field containing the name assigned to the environment. This name may be the WLM ENVIRONMENT specified as part of the SQL CREATE PROCEDURE syntax.

### Description
A thirty-two character field describing the WLM ENVIRONMENT

### Subsystem Type
For DB2 threads, this value is always "DB2".

### WLM Started Task Procedure Name
An eight character field containing the name of the server address space in which this enclave is executing.

### Start Parameters
A hundred-fifteen character field containing any parameters to be passed to the stored procedure.
**Classification work qualifiers**

*Note: Please review the topic "Using Workload Manager to set performance objectives" in the DB2 Administration Guide.*

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subsystem Type</strong></td>
<td>The primary qualifier used to classify work on the system. Examples are JES, ASCH, OMVS, STC, TSO, and DDF.</td>
</tr>
<tr>
<td><strong>Correlation</strong></td>
<td>A name associated with the user/program creating the work request.</td>
</tr>
<tr>
<td><strong>Proc Name</strong></td>
<td>An eighteen character field containing the DB2 stored SQL procedure name associated with the work request.</td>
</tr>
<tr>
<td><strong>Trans Program Name</strong></td>
<td>An eight character field containing the transaction name for the work request, as known by the work manager.</td>
</tr>
<tr>
<td><strong>UserId</strong></td>
<td>An eight character field containing the User ID associate with the work request.</td>
</tr>
<tr>
<td><strong>Transaction Class</strong></td>
<td>An eight character field containing a class name within a subsystem. This can be any meaningful value that the installation can recognize and specify to match the value presented by the work manager.</td>
</tr>
<tr>
<td><strong>Network ID</strong></td>
<td>An eight character field containing the network identifier associated with the requestor.</td>
</tr>
<tr>
<td><strong>Logical Unit Name</strong></td>
<td>An eight character field containing the local LU name associated with the requestor.</td>
</tr>
<tr>
<td><strong>Plan Name</strong></td>
<td>An eight character field containing the DB2 plan name associated with the requestor.</td>
</tr>
<tr>
<td><strong>Package Name</strong></td>
<td>An eight character field containing the DB2 package name associated with the requestor.</td>
</tr>
<tr>
<td><strong>Connection</strong></td>
<td>An eight character field containing the connection type associated with the requestor.</td>
</tr>
<tr>
<td><strong>Collection</strong></td>
<td>An eighteen character field containing the collection name associated with the requestor.</td>
</tr>
<tr>
<td><strong>Function Name</strong></td>
<td>An eight character field containing the function name associated with the requestor.</td>
</tr>
<tr>
<td><strong>Subsystem Name</strong></td>
<td>An eight character field containing the subsystem name associated with the requestor.</td>
</tr>
<tr>
<td><strong>Accounting Info</strong></td>
<td>The first sixteen characters passed as accounting information on the batch jobcard.</td>
</tr>
<tr>
<td><strong>Subsystem Parm</strong></td>
<td>The first sixteen characters passed as a subsystem parameter. This is site defined information.</td>
</tr>
<tr>
<td><strong>Perform</strong></td>
<td>An eight character field containing the performance group number (PGN) associated with the request. The value may be between 1-999.</td>
</tr>
<tr>
<td><strong>Subsystem Priority</strong></td>
<td>An numeric field containing the priority associated with the request.</td>
</tr>
</tbody>
</table>
Threads with an Associated Enclave Token

**Scheduling Env**
A sixteen character field containing the scheduling environment associated with the work request.

**Subsys Coll Name**
An eight character field containing the subsystem collection name associated with the request. A subsystem collection is a named group of related subsystem address spaces.

**Process Name**
A thirty-two character field containing the process name associated with the work request.

**Performance Index Input Data**
*Depending on the type of performance goal for the current period, Certain input numbers are used to compute the performance index.*

**Velocity Goal**
Total Usings (U) - This is a sum of the number of times the work for the service class period is allowed to use WLM managed resources.

Total Delays (D) - This is a sum of the number of times the work for the service class period is delayed for lack of WLM managed resources.

The formula for Actual Velocity (V) is:
\[ V = \frac{U}{U + D} \]

Compute Performance Index (PI) using the goal velocity (G)
\[ PI = \frac{G}{V} \]

**Average Response Time Goal**
Completed Trans (C) - This is a count of all the completed transactions which have run for this Service Class Period.

Total Elapsed Seconds (T) - This is a sum of the time used to complete the transactions which have run for this Service Class Period.

Average Response Time (A) - \[ A = \frac{T}{C} \]

Compute Performance Index (PI) using the Goal Response Time (G)
\[ PI = \frac{A}{G} \]

**Percentile Response Time Goal**
Percentile Performance Index is found by examining the distribution of response times in the percentage array (PA).

Total Transactions (TT) - \[ TT = \text{Sum}(PA) \]

Compute Goal (G) Using the Goal Percentile (GP)
\[ G = TT * GP \]

Sum the array again, until you reach or surpass the Goal (G). The corresponding percentage is the Performance Index (PI) to two decimal places.
Threads with an Associated Enclave Token
Introduction

OMEGAMON II provides information about locking conflicts through a series of five screens.

Chapter Contents

Locking Conflicts .................................................. 160
Locks/Claims Owned by a Thread ......................... 162
Thread Lock/Claim/Drain Activity ......................... 167
Locks/Claims Causing a Thread to Wait .................. 170
Thread Global Lock Activity ............................... 175
Locking Conflicts

The Locking Conflicts screen analyzes locking conflicts within DB2. A locking conflict exists when a DB2 user owning a lock causes other lock requests to wait. In general, when DB2 cannot satisfy a lock request, it suspends the thread issuing the request.

This screen provides information about the owners and waiters currently involved in locking conflicts.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>ETIM</td>
<td>Elapsed time is high.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- a lock owner, move the cursor to the lock owner line and press the zoom key (PF11).
- a lock waiter, move the cursor to the lock waiter line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. The output lines are displayed in descending order, with those reflecting the greatest degree of conflict displayed first.

- **Stat**: The status of the thread: OWN or WAIT. OWN indicates that the thread is a lock owner. WAIT indicates that the thread is suspended because the lock it requested is owned by another thread.
- **Plan**: The name of the DB2 plan that is currently active in this thread.
- **Corrid**: The DB2 correlation identifier for the thread involved in the locking conflict.
- **Type**: The type of lock that is owned or requested and is unavailable. For more information about lock types, see “Lock Types and Lock Levels” on page 611.
- **Lvl**: The level at which the lock is owned or was requested. The level of a lock requested is frequently the reason for lock suspensions. For more information about lock levels, see “Lock Types and Lock Levels” on page 611.
Resource  The resource that is currently locked by the lock owner, or the lock resource causing
the lock to be suspended.  The resource varies depending upon the type of lock
held.  This field displays the following resources:

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBP</td>
<td>BP=buffer pool ID</td>
</tr>
<tr>
<td>BIND</td>
<td>COLL=collection ID  PKG=package name</td>
</tr>
<tr>
<td>CDRN</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>COLL=collection ID</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>HASH CLASS=class number</td>
</tr>
<tr>
<td>DPAG</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DSET</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DTBS</td>
<td>DB=database name</td>
</tr>
<tr>
<td>GRBP</td>
<td>BP=buffer pool ID</td>
</tr>
<tr>
<td>HASH</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>IEOF</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>IPAG</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>MDEL</td>
<td>DB=database name  PS=pageset name</td>
</tr>
<tr>
<td>PBPC</td>
<td>BP=buffer pool ID</td>
</tr>
<tr>
<td>PCDB</td>
<td>DB=database name</td>
</tr>
<tr>
<td>PDSO</td>
<td>DB=database name  PS=pageset name</td>
</tr>
<tr>
<td>PITR</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>PPAG</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>PPSC</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>PPSP</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>PRLF</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>PSET</td>
<td>DB=database name  PS=pageset name</td>
</tr>
<tr>
<td>PSPI</td>
<td>DB=database name  PS=pageset name</td>
</tr>
<tr>
<td>ROW</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>RSTR</td>
<td>BMC-RSTP</td>
</tr>
<tr>
<td>SDBA</td>
<td>DB=dataset name  PS=pageset name</td>
</tr>
<tr>
<td>SKCT</td>
<td>PLAN=plan name</td>
</tr>
<tr>
<td>SREC</td>
<td>DB=database name  TS=tablespace name</td>
</tr>
<tr>
<td>TABL</td>
<td>DB=database name  PS=pageset name</td>
</tr>
<tr>
<td>UNDT</td>
<td>Resource ID (in hexadecimal)</td>
</tr>
<tr>
<td>UTID</td>
<td>UID=utility identifier</td>
</tr>
<tr>
<td>UTSE</td>
<td>UTSERIAL</td>
</tr>
<tr>
<td>WDRN</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
</tbody>
</table>

For more information about lock resources, see “Lock Types and Lock Levels” on page 611.
Locks/Claims Owned by a Thread

The Locks/Claims Owned by a Thread screen helps you analyze all locks and claims owned by a specific DB2 thread. The information provided allows you to determine the number of locks owned, the type and level of the locks, as well as the object of the locks. It also provides a list of claims held by the thread.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>ARCM</td>
<td>Backout requires an archive tape log mount.</td>
</tr>
<tr>
<td></td>
<td>ETIM</td>
<td>This thread reached the elapsed time threshold value.</td>
</tr>
<tr>
<td></td>
<td>GETP</td>
<td>The rate for getpages per read I/O is low.</td>
</tr>
<tr>
<td></td>
<td>INDB</td>
<td>The thread is indoubt and terminated.</td>
</tr>
<tr>
<td></td>
<td>PREF</td>
<td>The sequential prefetch rate is high.</td>
</tr>
<tr>
<td></td>
<td>RIO</td>
<td>The synchronous read I/O rate is high.</td>
</tr>
<tr>
<td></td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td></td>
<td>LKUS</td>
<td>The ratio of data locks owned to NUMLKUS is high.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about related topics, choose one of the options on the top of the screen.

- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan** The DB2 plan name of the active thread.
- **Connid** The DB2 connection identifier of the active thread.
- **Corrid** The DB2 correlation identifier of the active thread.
- **Authid** The DB2 authorization identifier of the active thread.
Locking Conflict Information

Locks/Claims Owned by a Thread

Attachment Identifier

This information changes depending upon the type of connection:

**Package**  
The DB2 package identifier of the active thread.

**Collection**  
The package collection identifier. This field appears only if a package is being used.

**Batch**  
The MVS jobname and ASID.

**CICS**  
The CICS jobname, task name, task number, terminal ID, and thread type.  
The thread type is:

- **Pool**  
The thread in use is a pool thread.
- **Enty**  
The thread in use is a nonprotected entry thread.
- **Prot**  
The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

**IMS**  
The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**  
The TSO user ID and region ASID.

**System**  
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

**Type**  
The distributed thread type.

- **Distributed Allied**  
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**  
  A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**  
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```
## Lock Ownership Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent NUMLKUS</td>
<td>The current percentage of NUMLKUS reached by the thread. NUMLKUS is an installation parameter in DSNZPARM that specifies the maximum number of page locks (in the tablespace or indexspace) that an application can hold.</td>
</tr>
<tr>
<td>Total Locks Owned</td>
<td>The total number of all locks owned by the thread. This includes all lock types.</td>
</tr>
<tr>
<td>Total Catalog Locks</td>
<td>Total of all catalog locks owned. This number includes any locks owned on a page or tablespace in database DSNDB06. This is the total of the catalog pageset and page locks.</td>
</tr>
<tr>
<td>Pageset and Dataset Locks</td>
<td>The total number of pageset locks held. This excludes pageset locks in which the lock object is a pageset owned by the catalog database or the directory database. Lock types included are PSET and DSET.</td>
</tr>
<tr>
<td>Catalog Pageset Locks</td>
<td>The total number of pageset locks in which the object of the lock is a pageset owned by the catalog (DSNDB06) database (PSET).</td>
</tr>
<tr>
<td>Page/Row Locks</td>
<td>Total number of page and row locks owned by the thread. It includes data page locks (DPAG), index page locks (IPAG), and row locks (ROW). It excludes any locks in which the lock object is owned by the catalog database or the directory database. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Catalog Page/Row Locks</td>
<td>The total number of page and row locks on the catalog (DSNDB06) database. This includes data page (DPAG), index page (IPAG), and row (ROW) locks. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Data and Index Page Locks</td>
<td>Total number of page locks owned by the thread. This number includes lock types DPAG and IPAG. It excludes any locks in which the lock object is owned by the catalog database or the directory database. This field appears only for DB2 Version 3.</td>
</tr>
<tr>
<td>Catalog Page Locks</td>
<td>The total number of page locks in which the object of the lock is a data or index page owned by the catalog (DSNDB06) database. This includes both index page (IPAG) and data page (DPAG) locks. This field appears only for DB2 Version 3.</td>
</tr>
<tr>
<td>Directory and Other Locks</td>
<td>The total number of directory and other locks owned by the thread. Directory locks are issued against resources contained in the DSNDB01 directory database.</td>
</tr>
<tr>
<td>Bind ACQUIRE Option</td>
<td>The ACQUIRE option specified at BIND time: ALLOCATE or USE. This option allows you to control when the allocation of tablespace locks is to occur. If ACQUIRE(USE) is specified, tablespace locks will be acquired when the resource is used by the application. When ACQUIRE(ALLOCATE) is specified, all tablespace locks will be obtained at plan allocation time. Dynamic SQL users (QMF, SPUFI) always execute with the ACQUIRE(USE) option. Dynamic SQL users (QMF, SPUFI) always execute with the ACQUIRE(USE) option.</td>
</tr>
<tr>
<td>Bind RELEASE Option</td>
<td>The RELEASE option specified at BIND time: COMMIT or DEALLOCATE. The RELEASE option allows the user to control when tablespace and SKCT locks are freed. The use of RELEASE(COMMIT) causes these locks to be released at each commit point. On the other hand, RELEASE(DEALLOCATE) causes them to be freed at application termination. Note that page locks are always released at commit time regardless of the release option.</td>
</tr>
</tbody>
</table>
The ISOLATION option specified when the plan is bound.

The isolation parameter enables you to control the data consistency in the pages that the plan accesses. It has an effect on the number of page or row locks held concurrently by an application. The available options are:

**Cursor stability (CS)**

CS causes a page lock acquired for read processing to be released when the application subsequently accesses data contained on another data page. (Page locks acquired as a result of update activity are always retained until commit.)

**Repeatable read (RR)**

RR causes all application locks obtained for read processing to be retained until application commit time.

**Uncommitted read (UR)**

UR causes data to be read without acquiring locks. This can result in accessing data that has been updated but not yet committed. It applies only to DB2 Version 4 and above, and to read-only operations: SELECT, SELECT INTO, or FETCH from a read-only result table. Use this isolation level only when

- data consistency is not necessary or inconsistencies already exist
- errors cannot occur with its use, such as with a reference table that is rarely updated

**Type**

The lock type owned. Every lock type owned by the thread will be displayed. For more information about lock types, see “Lock Types and Lock Levels” on page 611.

**Level**

The lock levels of the various lock types owned. All lock levels owned within a lock type will be listed. Lock levels may appear repetitively for a single lock type due to the different resources owned by the locks.

For more information about lock levels, see “Lock Types and Lock Levels” on page 611.

**Resource**

The resource that is the object of the lock. The content of the Resource field is dependent on lock type. For data page (DPAG) and index page (IPAG) locks, the resource does not contain the actual data page number that is locked; it lists the database and pageset owning the data or index page lock. The Number field then displays how many data or index page locks exist within the resource (pageset) listed.

For more information about lock resources, see “Lock Types and Lock Levels” on page 611.

**Number**

The number of locks meeting the type, level, and resource description of the lock.
## Claim Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>Tablespace</td>
</tr>
<tr>
<td>TS PART</td>
<td>Data Partition</td>
</tr>
<tr>
<td>IX</td>
<td>Indexspace</td>
</tr>
<tr>
<td>IX PART</td>
<td>Index Partition</td>
</tr>
</tbody>
</table>

### Type
The type of object being claimed. Possible object types are:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>Tablespace</td>
</tr>
<tr>
<td>TS PART</td>
<td>Data Partition</td>
</tr>
<tr>
<td>IX</td>
<td>Indexspace</td>
</tr>
<tr>
<td>IX PART</td>
<td>Index Partition</td>
</tr>
</tbody>
</table>

### Class
The claim class. Possible claim classes are:

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>Cursor Stability</td>
</tr>
<tr>
<td>RR</td>
<td>Repeatable Read</td>
</tr>
<tr>
<td>Write</td>
<td></td>
</tr>
</tbody>
</table>

### Resource
The name of the resource being claimed. This includes the database name, pageset name, and the partition number (if any).
Thread Lock/Claim/Drain Activity

The Thread Lock/Claim Drain Activity screen provides a summary of lock related activity for an individual thread.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as the other thread detail screens.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about related topics, choose one of the options on the top of the screen.

- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

Thread Identifier

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Stat**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
- **Package**: The DB2 package identifier of the active thread.
- **Collection**: The package collection identifier. This field appears only if a package is being used.
**Attachment Identifier**

This information changes depending upon the type of connection:

<table>
<thead>
<tr>
<th>Type</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch</strong></td>
<td>The MVS jobname and ASID.</td>
</tr>
<tr>
<td><strong>CICS</strong></td>
<td>The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:</td>
</tr>
<tr>
<td>Pool</td>
<td>The thread in use is a pool thread.</td>
</tr>
<tr>
<td>Entry</td>
<td>The thread in use is a nonprotected entry thread.</td>
</tr>
<tr>
<td>Prot</td>
<td>The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.</td>
</tr>
<tr>
<td><strong>IMS</strong></td>
<td>The IMS region number, transaction name, region name, and terminal ID (LTERM).</td>
</tr>
<tr>
<td><strong>TSO</strong></td>
<td>The TSO user ID and region ASID.</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.</td>
</tr>
</tbody>
</table>

**Distributed Thread Identifier**

The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

<table>
<thead>
<tr>
<th>Type</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>The distributed thread type.</td>
</tr>
<tr>
<td><strong>Distributed Allied</strong></td>
<td>A requesting thread; one that has issued an SQL call to a remote DB2 location.</td>
</tr>
<tr>
<td><strong>Database Access</strong></td>
<td>A responding thread; one that is serving a remote DB2 location by responding to an SQL call.</td>
</tr>
<tr>
<td><strong>Luwid</strong></td>
<td>This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:</td>
</tr>
<tr>
<td>luw-id=token</td>
<td>The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:</td>
</tr>
<tr>
<td>USCAC001.02D22A.A1FE8E04B9D4=8</td>
<td>System</td>
</tr>
</tbody>
</table>
### Lock Count Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lock Requests</strong></td>
<td>Requests to IRLM to obtain a lock on a resource.</td>
</tr>
<tr>
<td><strong>Deadlocks Detected</strong></td>
<td>The number of deadlocks detected.</td>
</tr>
<tr>
<td><strong>Unlock Requests</strong></td>
<td>Requests to IRLM to unlock a resource.</td>
</tr>
<tr>
<td><strong>Timeouts Detected</strong></td>
<td>The number of times that the suspension of a unit of work lasted longer than the IRLM timeout value.</td>
</tr>
<tr>
<td><strong>Query Requests</strong></td>
<td>Requests to IRLM to query a lock.</td>
</tr>
<tr>
<td><strong>Suspends - Lock Only</strong></td>
<td>Suspensions of a unit of work because a lock could not be obtained.</td>
</tr>
<tr>
<td><strong>Change Requests</strong></td>
<td>Requests to IRLM to change a lock.</td>
</tr>
<tr>
<td><strong>Suspends - Latch Only</strong></td>
<td>DB2 internal latch suspensions.</td>
</tr>
<tr>
<td><strong>Other IRLM Requests</strong></td>
<td>Requests to IRLM to perform a function other than those listed above.</td>
</tr>
<tr>
<td><strong>Suspends - Other</strong></td>
<td>Suspensions caused by something other than locks and latches.</td>
</tr>
<tr>
<td><strong>Escalations to Shared</strong></td>
<td>Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IS) lock to escalate to a shared (S) lock.</td>
</tr>
<tr>
<td><strong>Escalations to Exclusive</strong></td>
<td>Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IX) lock to escalate to an exclusive (X) lock.</td>
</tr>
<tr>
<td><strong>Maximum Page Locks</strong></td>
<td>The maximum number of page locks held concurrently. This count cannot exceed the value of the NUMLKUS (locks per user) installation parameter. This field appears only for DB2 Version 3.</td>
</tr>
<tr>
<td><strong>Maximum Page/Row Locks</strong></td>
<td>The maximum number of page or row locks held concurrently. This count cannot exceed the value of the NUMLKUS (locks per user) installation parameter. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td><strong>Claim Requests</strong></td>
<td>The number of claim requests.</td>
</tr>
<tr>
<td><strong>Claims Failed</strong></td>
<td>The number of unsuccessful claim requests.</td>
</tr>
<tr>
<td><strong>Drain Requests</strong></td>
<td>The number of drain requests.</td>
</tr>
<tr>
<td><strong>Drains Failed</strong></td>
<td>The number of unsuccessful drain requests.</td>
</tr>
</tbody>
</table>
Locks/Claims Causing a Thread to Wait

The Locks/Claims Causing a Thread to Wait screen provides information about thread locking activity. It allows you to determine whether a selected thread is suspended and waiting due to a locking or claims conflict. When a thread is suspended, this screen provides the name of the lock/claim request causing the suspension. It also provides a list of all locks/claims currently held by other threads causing the thread to be suspended. This screen displays either lock wait information or drain information.

**Highlighting**

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>ARCM</td>
<td>Backout requires an archive tape log mount.</td>
</tr>
<tr>
<td></td>
<td>ETIM</td>
<td>This thread reached the elapsed time threshold value.</td>
</tr>
<tr>
<td></td>
<td>GETP</td>
<td>The rate for getpages per read I/O is low.</td>
</tr>
<tr>
<td></td>
<td>INDB</td>
<td>The thread is indoubt and terminated.</td>
</tr>
<tr>
<td></td>
<td>PREF</td>
<td>The sequential prefetch rate is high.</td>
</tr>
<tr>
<td></td>
<td>RIO</td>
<td>The synchronous read I/O rate is high.</td>
</tr>
<tr>
<td></td>
<td>PGUP</td>
<td>The rate for page updates is high.</td>
</tr>
<tr>
<td></td>
<td>WTRE</td>
<td>The lock has been waiting for a resource for too long.</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies:
- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
Locking Conflict Information

Locks/Claims Causing a Thread to Wait

**Attachment Identifier**
This information changes depending upon the type of connection:

- **Package**
  The DB2 package identifier of the active thread.

- **Collection**
  The package collection identifier. This field appears only if a package is being used.

**Batch**
The MVS jobname and ASID.

**CICS**
The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:

- **Pool**
  The thread in use is a pool thread.

- **Enty**
  The thread in use is a nonprotected entry thread.

- **Prot**
  The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

**IMS**
The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**
The TSO user ID and region ASID.

**System**
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

**Type**
The distributed thread type.

- **Distributed Allied**
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**
  A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```
Drain Information

Type
The type of object being drained. Possible object types are:

- TS  Tablespace
- TS PART  Data Partition
- IX  Indexspace
- IX PART  Index Partition

Class
The drain class. Possible classes are:

- CS  Drain all CS read access to object.
- RR  Drain all RR access to object.
- Write  Drain all write access to object.

Resource
The name of the resource being drained. This includes the database name, pageset name, and the partition number (if any).

Claim Information

Plan
The planname of the thread claiming the resource.

Connid
The connection identifier of the thread claiming the resource.

Corrid
The correlation identifier of the thread claiming the resource.

Class
The claim class. Possible classes are:

- CS  Cursor Stability
- RR  Repeatable Read
- Write  Write access

Lock Wait Information

Type
The lock type on which the thread is waiting. For more information on lock types, see “Lock Types and Lock Levels” on page 611.

Level
The level or state (mode) of the lock request. This information describes the level of resource access demanded by the lock request. For more information on lock levels, see “Lock Types and Lock Levels” on page 611.
Resource
The resource for which the user is waiting. The content of the Resource field is dependent on lock type.

The resource varies depending upon the type of lock held. This field displays the following resources:

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBP</td>
<td>BP=buffer pool ID</td>
</tr>
<tr>
<td>BIND</td>
<td>COLL=collection ID  PKG=package name</td>
</tr>
<tr>
<td>CDRN</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>COLL=collection ID</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>HASH CLASS=class number</td>
</tr>
<tr>
<td>DPA</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DPAG</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
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<td>COLL</td>
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<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
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<td>DBXU</td>
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<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
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<tr>
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<td>DB=database name  PS=pageset name  PT=partition</td>
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<tr>
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<tr>
<td>COLL</td>
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<tr>
<td>DBEX</td>
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</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>COLL</td>
<td>DB=database name  PS=pageset name  PG=page</td>
</tr>
<tr>
<td>DBEX</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB=database name  PS=pageset name  PT=partition</td>
</tr>
</tbody>
</table>

For more information on lock resources, see “Lock Types and Lock Levels” on page 611.

Wait For Lock Time
The amount of time that DB2 has been waiting for the locked resource.
**Locks/Claims Causing a Thread to Wait**

<table>
<thead>
<tr>
<th># To Repeat</th>
<th>The number of times DB2 will repeat the lock timeout.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock Timeout</td>
<td>The maximum amount of time that DB2 will wait for a locked resource. When DB2 reaches the maximum value, it rolls back the unit of work.</td>
</tr>
</tbody>
</table>

**Lock Owner Information**

<table>
<thead>
<tr>
<th>Plan</th>
<th>The DB2 plan name of the active thread.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the active thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the active thread.</td>
</tr>
<tr>
<td>Lvl</td>
<td>The lock level owned. For more information about lock levels, see “Lock Types and Lock Levels” on page 611.</td>
</tr>
</tbody>
</table>
Thread Global Lock Activity

The Thread Global Lock Activity screen provides a summary of global locking activity for an individual thread. This screen appears for DB2 Version 4 when data sharing is active. The information provided by this screen can assist you in properly sizing the coupling facility lock structure and reducing global lock contentions for transactions.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Any</td>
<td>Same as the other thread detail screens.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about related topics, choose one of the options on the top of the screen.

- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen:

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
- **Package**: The DB2 package identifier of the active thread.
- **Collection**: The package collection identifier. This field appears only if a package is being used.
Attachment Identifier

This information changes depending upon the type of connection:

**Batch**  The MVS jobname and ASID.

**CICS**  The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:

- **Pool**  The thread in use is a pool thread.
- **Enty**  The thread in use is a nonprotected entry thread.
- **Prot**  The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

**IMS**  The IMS region number, transaction name, region name, and terminal ID (LTERM).

**TSO**  The TSO user ID and region ASID.

**System**  The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.

Distributed Thread Identifier

The following fields are displayed when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**  The distributed thread type.

- **Distributed Allied**  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**  A responding thread; one that is serving a remote DB2 location by responding to an SQL call.

**Luwid**  This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

  luw-id=token

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

  USCACO01.O2D22A.A1FE8E04B9D4=8
### Global Lock Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P-lock Lock Requests</strong></td>
<td>Number of lock requests for P-locks. A P-lock is a physical lock used only in a data sharing environment to provide consistency of data cached in different DB2 subsystems.</td>
</tr>
<tr>
<td><strong>XES Lock Requests</strong></td>
<td>The number of lock requests (both logical and physical) that were propagated to MVS XES synchronously under the caller’s execution unit. This count does not include suspended requests. Only the most restrictive lock for a particular resource is propagated to XES and the coupling facility.</td>
</tr>
<tr>
<td><strong>P-lock Unlock Requests</strong></td>
<td>Number of unlock requests for P-locks.</td>
</tr>
<tr>
<td><strong>XES Unlock Requests</strong></td>
<td>The number of unlock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller’s execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td><strong>P-lock Change Requests</strong></td>
<td>Number of change requests for P-locks.</td>
</tr>
<tr>
<td><strong>XES Change Requests</strong></td>
<td>The number of change requests (both logical and physical) that were propagated to MVS XES synchronously under the caller’s execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td><strong>Suspends - IRLM Global Cont</strong></td>
<td>The number of suspends due to IRLM global resource contentions. IRLM lock states were in conflict and inter-system communication is required to resolve the conflict.</td>
</tr>
<tr>
<td><strong>Total L-lock Requests</strong></td>
<td>The total number of L-lock requests. An L-lock is a logical lock used to control intra- and inter-DB2 data concurrency between transactions.</td>
</tr>
<tr>
<td><strong>Suspends - XES Global Cont</strong></td>
<td>The number of suspends due to MVS XES global resource contentions that were not IRLM-level contentions. The XES lock states were in conflict, but the IRLM lock states were not.</td>
</tr>
<tr>
<td><strong>XES L-lock Req Percentage</strong></td>
<td>The number of suspends caused by MVS XES false contentions. XES detects hash class contention when two different locks on different resources hash to the same entry in the coupling facility lock table. The requester is suspended until it is determined that there is no real lock contention.</td>
</tr>
<tr>
<td><strong>Incompatible Retained Locks</strong></td>
<td>The number of global lock or change requests that failed because of an incompatible retained lock. Certain P-locks can be retained because of a system failure. Another DB2 member cannot access the data that the retained P-lock is protecting unless it requests a P-lock in a compatible state.</td>
</tr>
<tr>
<td><strong>False Contention Percentage</strong></td>
<td>The rate of false contentions to real contentions. This number should be no more than 50%.</td>
</tr>
<tr>
<td><strong>Notify Messages Sent</strong></td>
<td>The number of notify messages sent.</td>
</tr>
</tbody>
</table>
Introduction

OMEGAMON II provides information about the DB2 resource managers and system-related information through a series of screens.

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Resource Managers and Other DB2 Subsystem Information

The Resource Managers and Other DB2 Subsystem Information Menu provides access to the screens that display subsystem level information about DB2. This information covers, for example, DB2 resource managers, current trace activity, and DSNZPARM parameters.

Highlighting

OMEGAMON II does not highlight any fields on the Resource Managers and Other DB2 Subsystem Information menu.

Navigation

For additional information about

- related topics, choose one of the options from the menu.
- other topics, use the OMEGAMON II PF keys.

Fields

The Resource Managers and Other DB2 Subsystem Information Menu does not display any output fields. It displays navigation options to other screens that display information about the DB2 resource managers, as well as other types of subsystem information. The following is a short description of the navigation options available from the Resource Managers and Other DB2 Subsystem Information Menu:

**BUFFER MANAGER**  Provides information about the performance of the DB2 buffer manager and the activity in each of the buffer pools.

**LOG MANAGER**  Provides information about the active logging and archival activity of the DB2 log manager.

**EDM POOL**  Provides information about the activity in and performance of the EDM pool.
Resource Managers and Other DB2 Subsystem Information

BIND STATISTICS
Displays bind operation counts.

SUBSYSTEM MANAGER
Displays workload-related information about the DB2 subsystem you are monitoring.

ACTIVE TRACES
Displays summary and detail information about the DB2 traces that are currently active.

START-UP OPTIONS
Displays the IRLM and stored procedures startup options and information about current common storage usage.

DSNZPARM
Displays the settings of the installation options in the DSNZPARM module.

LOCK/CLAIM/DRAIN
Displays information about current locking activity and claim and drain statistics.

SQL/RID POOL/PARALLEL
Displays information about current SQL activity, RID pool accesses, parallelism, and stored procedure information.

OPEN/CLOSE STATISTICS
Provides information about open and close dataset activity occurring within the DB2 subsystem.

DB2 COMMANDS
Provides information about DB2 command activity.
Buffer Manager Information

The Buffer Manager Information screen provides information about the performance of the DB2 buffer manager and the activity in each of the buffer pools. This information helps you analyze buffer pool utilization.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status.

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages In Use</td>
<td>BMTH</td>
<td>The percentage in use has reached the threshold defined.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- a buffer pool, move the cursor to the buffer pool line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Current Number Open Datasets**: The number of datasets that are currently open in DB2.
- **High Water Mark Open Datasets**: The largest number of datasets that were open simultaneously in DB2 since DB2 started.
- **Maximum Number Open Datasets Allowed**: Determines how much initial memory to allocate for the datasets at startup time (defined by DSNZPARM DSMAX). For MVS/ESA Version 4 and above, the absolute maximum number of datasets that can be open at one time is determined by the TIOT SIZE specified in SYS1.PARMLIB(ALLOCxx). Prior to MVS/ESA Version 4, the value that actually determines the number of datasets that can be open at one time is DEFTIOTS, which is a field in the IEFAB445.
- **Open Dataset Count in Active Pools**: The total number of opens issued for the buffer pools that are currently active. This value reflects the number of times the datasets have been opened (and reopened) since DB2 started. (Buffer pools not currently in use may have issued opens that are not reflected in this count.)
- **Pool ID**: The ID of the buffer pool.
- **VP Size**: The number of buffers allocated for an active virtual buffer pool.
- **HP Size**: The number of buffers allocated for an active hiperpool. (Hiperpools are not supported in DB2 Version 8.1)
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages Alloc</td>
<td>The number pages currently allocated to the buffer pool. If a buffer pool is in use, Pages Alloc will be between the minimum and maximum values. Otherwise, it will be zero.</td>
</tr>
<tr>
<td>Pages In Use</td>
<td>The number of 4K, 8K, 16K, or 32K pages currently in use by the buffer pool. (8K and 16K pages are available only if you are running DB2 Version 6.1.)</td>
</tr>
<tr>
<td>Getp Rate</td>
<td>The number of getpage requests per second made by the buffer pool.</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>The total number of read I/Os per second made by the buffer pool.</td>
</tr>
<tr>
<td>Prefetch Req Rate</td>
<td>The number of sequential and list prefetch requests per second made by the buffer pool.</td>
</tr>
<tr>
<td>Write I/O Rate</td>
<td>The number of write I/Os per second.</td>
</tr>
</tbody>
</table>
Group Buffer Pool Information

The Group Buffer Pool Information screen provides information about group buffer pools that a DB2 member connected to. This screen is available only for DB2 Version 4 and above when running in a data sharing environment.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- buffer pools, enter A in the top line
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Pool ID**: The group buffer pool identifier.
- **Read Rate**: The number of reads per second to the group buffer pool.
- **Read Hit %**: The percentage of all reads to the group buffer pool for which the needed data was found and returned to the member.
- **Pages Not Returned - R/W Int %**: The percentage of all reads to the group buffer pool where
  - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
  - other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.
- **Pages Not Returned - No Int %**: The percentage of all reads to the group buffer pool where
  - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
  - no other member had read/write interest in the pageset, so DB2 did not have to register the page.
- **Read/Write Failed**: The number of read or write requests to the group buffer pool that failed because of a lack of storage resources.
- **Write Rate**: The number of writes per second to the group buffer pool.
- **Pages Castout**: The number of pages that this member has castout to DASD from the group buffer pool.
Buffer Pool Detail

The Buffer Pool Detail screen provides detailed information about the current activity in the specified DB2 buffer pool or summarized information for all buffer pools.

From this screen you can access information about buffer pool contents by selecting the A option at the top of the screen. You can also access the corresponding near-term history display by selecting the H option on the top of the screen.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status.

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Pages in Use</td>
<td>BMTH</td>
<td>The percentage in use has reached the threshold defined.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about:
- buffer pool contents, Select the A option at the top of the screen.
- near-term historical activity, choose the H option at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

If a buffer pool is not currently in use by DB2, all fields are zero. OMEGAMON II displays accumulated counts again when DB2 is using the buffer pool.

The Buffer Pool Detail screen displays data for a specified buffer pool or data summarized for all buffer pools. Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field always displays REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. The collection interval and the report interval are the same on this screen.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Virtual Buffer Pool Size</td>
<td>The number of buffers allocated for an active virtual buffer pool.</td>
</tr>
<tr>
<td>Hiperpool Size</td>
<td>The number of buffers allocated for an active hiperpool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Buffer Pool Detail</strong></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td></td>
</tr>
<tr>
<td><strong>VPOOL Buffers Allocated</strong></td>
<td>The number of virtual buffer pool pages that were allocated at the end of the interval.</td>
</tr>
<tr>
<td><strong>HPOOL Buffers Allocated</strong></td>
<td>The number of hiperpool pages that were allocated at the end of the interval. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HPOOL Buffers backed</strong></td>
<td>The number hiperpool pages that were backed by expanded storage at the end of the interval. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>VPOOL Buffer in Use</strong></td>
<td>The number of virtual buffer pool pages that were in use (non-stealable) at the end of the interval.</td>
</tr>
<tr>
<td><strong>Castout Attribute</strong></td>
<td>The castout attribute of the hiperspaces used to back the hiperpool: (Note: Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>VPOOL Buffers to be Del</strong></td>
<td>The number of pages to be deleted from an active virtual buffer pool as a result of pool contraction.</td>
</tr>
<tr>
<td><strong>HPOOL Buffers to be Deleted</strong></td>
<td>The number of pages to be deleted from an active hiperpool as a result of pool contraction. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Use Count</strong></td>
<td>The number of open tablespaces or indexspaces in this buffer pool.</td>
</tr>
<tr>
<td><strong>Hiperspace names</strong></td>
<td>The names of the hiperspaces backing the hiperpool. If the hiperpool is larger than 2GB, more than one hiperspace name is listed. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>VP Sequential Thresh</strong></td>
<td>Sequential steal threshold for the virtual buffer pool VPSEQT. The percentage of the virtual buffer pool that can be occupied by sequentially accessed pages. If set to zero, prefetch is disabled.</td>
</tr>
<tr>
<td><strong>HP Sequential Thresh</strong></td>
<td>Sequential steal threshold for the hiperpool HPSEQT. The percentage of the hiperpool that can be occupied by sequentially accessed pages. If set to zero, prefetch is disabled. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Deferred Write Thresh</strong></td>
<td>Deferred write threshold for the virtual buffer pool DWQT. Write operations are scheduled when the percentage of unavailable pages in the virtual buffer pool exceeds this threshold in order to decrease the unavailable pages to 10% below the threshold.</td>
</tr>
<tr>
<td><strong>Vert Deferred Write Thresh</strong></td>
<td>Vertical deferred write threshold for the virtual buffer pool VDWQT. The percentage of the buffer pool that might be occupied by updated pages from a single dataset.</td>
</tr>
<tr>
<td><strong>VP Parallel Seq Thresh</strong></td>
<td>Parallel I/O sequential threshold VPPSEQT. This threshold determines how much of the virtual buffer pool might be used for parallel I/O operations. It is expressed as a percentage of VPSEQT. If set to zero, I/O parallelism is disabled.</td>
</tr>
</tbody>
</table>

**Castout Attribute**

**YES** MVS allowed to discard data cached in the hiperpool when a shortage of expanded storage arises.

**NO** MVS is prevented from discarding data cached in the hiperpool unless expanded storage pages are reconfigured out of the system.
Buffer Pool Detail

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getpages per Sync I/O</td>
<td>The ratio of getpage request to read I/Os.</td>
</tr>
<tr>
<td>Pages Written per Write I/O</td>
<td>The ratio of pages written to physical I/Os.</td>
</tr>
<tr>
<td>Prefetch per I/O</td>
<td>The ratio of prefetch requests to physical I/Os.</td>
</tr>
<tr>
<td>Pages Read per Prefetch</td>
<td>The ratio of pages read by prefetch processing to total prefetch requests. This includes both sequential and list prefetch.</td>
</tr>
<tr>
<td>Seq Prefetch per I/O</td>
<td>The ratio of pages read by sequential prefetch to sequential prefetch I/O.</td>
</tr>
<tr>
<td>Pages Read per Seq Prefetch</td>
<td>The ratio of pages read by sequential prefetch to sequential prefetch requests.</td>
</tr>
<tr>
<td>List Prefetch per I/O</td>
<td>The ratio of list prefetch requests to list prefetch I/Os.</td>
</tr>
<tr>
<td>Pages Read per List Prefetch</td>
<td>The ratio of pages read by list prefetch to list prefetch requests.</td>
</tr>
<tr>
<td>Dyn Prefetch per I/O</td>
<td>The ratio of dynamic prefetch request to dynamic prefetch I/Os.</td>
</tr>
<tr>
<td>Pages Read per Dyn Prefetch</td>
<td>The ratio of pages read by dynamic prefetch to dynamic prefetch request.</td>
</tr>
<tr>
<td>Max Concur Prefetch I/O</td>
<td>The highest number of concurrent prefetch I/O streams that were allocated to support I/O parallelism.</td>
</tr>
<tr>
<td>Workfile Maximum</td>
<td>The maximum number of workfiles that have been allocated during sort/merge processing.</td>
</tr>
<tr>
<td>BP Hit % - Random</td>
<td>The percentage of times that DB2 went to get a page with a random request and it was already in the buffer pool. A DASD read was not required for the GETPAGE.</td>
</tr>
<tr>
<td>BP Hit % - Sequential</td>
<td>The percentage of times that DB2 went to get a page with a sequential request and it was already in the buffer pool. A DASD read was not required for the GETPAGE.</td>
</tr>
<tr>
<td>HP Hit Percentage</td>
<td>The hiperpool hit percentage. The percentage of times that DB2 went to the hiperpool for a page and it was there. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>HP Read-to-Write Percentage</td>
<td>The hiperpool read-to-write percentage. It is calculated from the ratio of the number of hiperpool reads, to the sum of the number of hiperpool reads and hiperpool writes.</td>
</tr>
</tbody>
</table>

For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.
Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getpage Requests</td>
<td>Getpage request operations for the buffer pool.</td>
</tr>
<tr>
<td>Getpage Requests - Sequential</td>
<td>Number of getpage requests issued by sequential access requestors.</td>
</tr>
<tr>
<td>Getpage Requests - Random</td>
<td>Number of getpage requests issued by random access requestors.</td>
</tr>
<tr>
<td>Getpage Failed - VPOOL Full</td>
<td>Number of getpage failures due to unavailable buffers because the virtual buffer pool was full.</td>
</tr>
<tr>
<td>Getpage Failed - Cond Request</td>
<td>Number of conditional getpage requests that could not be satisfied for this buffer pool. A conditional getpage is used with parallel I/O processing only.</td>
</tr>
<tr>
<td>Sync Read I/O Operations</td>
<td>Synchronous read operations done by DB2.</td>
</tr>
<tr>
<td>Sync Read I/Os - Sequential</td>
<td>Number of synchronous read I/O operations performed by sequential requests.</td>
</tr>
<tr>
<td>Sync Read I/Os - Random</td>
<td>Number of synchronous read I/O operations performed by random requests.</td>
</tr>
<tr>
<td>Page-in Required for Read I/O</td>
<td>Number of page-ins required for read I/O.</td>
</tr>
<tr>
<td>Pages Read via Seq Prefetch</td>
<td>Pages read as a result of sequential prefetch requests.</td>
</tr>
<tr>
<td>Seq Prefetch I/O Operations</td>
<td>Number of asynchronous read I/Os caused by sequential prefetch.</td>
</tr>
<tr>
<td>Sequential Prefetch Requests</td>
<td>Sequential prefetch requests for the buffer pool.</td>
</tr>
<tr>
<td>Pages Read via List Prefetch</td>
<td>Number of pages read because of list prefetch.</td>
</tr>
<tr>
<td>List Prefetch I/O Operations</td>
<td>Number of asynchronous I/Os caused by list prefetch.</td>
</tr>
<tr>
<td>List Prefetch Requests</td>
<td>List prefetch requests for the buffer pool.</td>
</tr>
<tr>
<td>Pages Read via Dyn Prefetch</td>
<td>Number of pages read because of dynamic prefetch. Dynamic prefetch is triggered because of sequential detection.</td>
</tr>
<tr>
<td>Dyn Prefetch I/O Operations</td>
<td>Number of asynchronous read I/Os caused by dynamic prefetch.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Dyn Prefetch Requests</strong></td>
<td>Dynamic prefetch requests for the buffer pool.</td>
</tr>
<tr>
<td><strong>Prefetch Failed - No Buffer</strong></td>
<td>Failures of sequential prefetch because the sequential prefetch threshold was reached.</td>
</tr>
<tr>
<td><strong>Prefetch Failed - No Engine</strong></td>
<td>Failures of sequential prefetch because the maximum number of concurrent sequential prefetches was reached. (You cannot change this maximum value.)</td>
</tr>
<tr>
<td><strong>HP Pages Read Sync</strong></td>
<td>Number of pages moved from the hiperpool to the virtual buffer pool under the control of a synchronous task. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HP Pages Read Async - No ADM</strong></td>
<td>Number of pages moved from the hiperpool to the virtual buffer pool under the control of an asynchronous task, such as prefetch. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HP Read Failed - No ADM</strong></td>
<td>Number of unsuccessful reads, synchronous and asynchronous, from the hiperpool. This happens when a page was found in the hiperpool but backing expanded storage was stolen or some other error occurred. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Parallel Group Requests</strong></td>
<td>Number of requests made for processing queries in parallel.</td>
</tr>
<tr>
<td><strong>Prefetch I/O Streams Reduced</strong></td>
<td>Number of requested prefetch I/O streams that were denied because of a buffer pool shortage. This applies only for non-workfile pagesets for queries that are processed in parallel.</td>
</tr>
<tr>
<td><strong>Parallelism Downgraded</strong></td>
<td>Number of times the requested number of buffers to allow a parallel group to run to the planned degree could not be allocated because of a buffer pool shortage.</td>
</tr>
<tr>
<td><strong>Prefetch Quan Reduced to 1/2</strong></td>
<td>Number of time the sequential prefetch quantity was reduced from normal to one-half of normal. This is done to continue to allow execution concurrently with parallel I/O.</td>
</tr>
<tr>
<td><strong>Prefetch Quan Reduced to 1/4</strong></td>
<td>Number of times the sequential prefetch quantity was reduced from one-half to one-quarter normal.</td>
</tr>
<tr>
<td><strong>Pages Updated</strong></td>
<td>Updated pages in the buffer pool.</td>
</tr>
<tr>
<td><strong>Pages Written</strong></td>
<td>Buffer pool pages written to DASD.</td>
</tr>
<tr>
<td><strong>Page-in Required for Write I/O</strong></td>
<td>Number of page-ins required for write I/O operations.</td>
</tr>
<tr>
<td><strong>Write I/O Operations</strong></td>
<td>Writes performed by media manager for both synchronous and asynchronous I/O.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Immediate (Sync) Writes</strong></td>
<td>Immediate writes to DASD. This value is incremented when 97.5% of the buffer pool pages are in use. In addition, DB2 may flag buffer pool pages for immediate write during checkpoint processing and when a database is stopped.</td>
</tr>
<tr>
<td><strong>Note:</strong> Consider the value of DMTH (Data Manager Threshold Reached) when interpreting this value. If DMTH is zero, this value is probably insignificant.</td>
<td></td>
</tr>
<tr>
<td><strong>Write Engine Not Available</strong></td>
<td>Writes that were deferred because DB2 reached its maximum number of concurrent writes.</td>
</tr>
<tr>
<td><strong>HP Pages Written Sync</strong></td>
<td>Number of pages moved synchronously from the virtual buffer pool to the hiperpool. Pages accessed by parallel I/O queries are not cached in the hiperpool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HP Pages Written Async - No ADM</strong></td>
<td>Number of pages moved from the virtual buffer pool to the hiperpool under the control of an asynchronous task such as prefetch. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HP Pages Written Async - ADM</strong></td>
<td>Number of pages moved to the virtual buffer pool from the hiperpool by the Asynchronous Data Mover Facility for an asynchronous task such as prefetch. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HP Write Failed - No ADM</strong></td>
<td>Number of unsuccessful writes to the hiperpool, synchronous and asynchronous, because of a shortage of expanded storage. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>HP Write Failed - ADM</strong></td>
<td>Number of writes to the hiperpool that failed using the Asynchronous Data Mover Facility because the backing expanded storage was stolen or some other error occurred. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Vert Def Write Threshold Reached</strong></td>
<td>Number of times the vertical deferred write threshold was hit.</td>
</tr>
<tr>
<td><strong>Deferred Write Threshold Reached</strong></td>
<td>Deferred write threshold (DWTH) was reached. This occurs when DB2 uses 50% of the buffer pool minimum value, or if a dataset has updated 10% of the buffer pool pages or 64 pages, whichever is greater. At this threshold, DB2 forces writes in an effort to free bufferpool space.</td>
</tr>
<tr>
<td><strong>Data Manager Threshold Reached</strong></td>
<td>Data manager threshold (DMTH) was reached. This occurs when DB2 uses 95% of the virtual buffer pool and begins to operate at the row level rather than the page level. When this occurs, CPU usage increases greatly.</td>
</tr>
<tr>
<td><strong>Successful VPOOL Expand/Contract</strong></td>
<td>Number of successful virtual buffer pool expansions or contractions because of the ALTER BUFFERPOOL command.</td>
</tr>
<tr>
<td><strong>Successful HPOOL Expand/Contract</strong></td>
<td>Number of successful hiperpool expansions or contractions because of the ALTER BUFFERPOOL command. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>VPOOL or HPOOL Expand Failed</strong></td>
<td>Number of virtual buffer pool or hiperpool expansion failures. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Successful Dataset Opens</td>
<td>Dataset open operations that were successful.</td>
</tr>
<tr>
<td>DFHSM Recall</td>
<td>Attempts to access datasets that were migrated by DFHSM.</td>
</tr>
<tr>
<td>DFHSM Recall Timeouts</td>
<td>Unsuccessful attempts to recall datasets because the timeout threshold (DSNZPARM RECALL) was exceeded.</td>
</tr>
<tr>
<td>Sort Merge Passes</td>
<td>The number of merge passes received from DB2. This value determines the number of workfiles available to support each merge pass.</td>
</tr>
<tr>
<td>Sort/Merge Workfile Requests</td>
<td>Workfiles requested during sort/merge processing.</td>
</tr>
<tr>
<td>Sort/Merge Workfile Req Denied</td>
<td>Requests for workfiles that were denied during merge processing due to insufficient buffer resources. (Each workfile needs at least 8 dedicated buffers to enable DB2 to perform efficient prefetch processing.)</td>
</tr>
<tr>
<td>Sort Merge Pass - Buff Short</td>
<td>Number of times that sort/merge could not efficiently perform due to insufficient buffer resources. This field is incremental when the number of workfiles allowed is less than the number of workfiles requested.</td>
</tr>
<tr>
<td>Workfile Prefetch Disabled</td>
<td>Number of times workfile prefetch was not scheduled because the prefetch quantity was zero.</td>
</tr>
<tr>
<td>Workfile Create Failed - No Buff</td>
<td>Number of times a workfile was not created due to insufficient buffers (MVS/XA only).</td>
</tr>
<tr>
<td>Destructive Read Requests</td>
<td>This value applies to Read Once Workfiles. When the last record of a page is read from one of these workfiles, the space is freed.</td>
</tr>
<tr>
<td>Destructive Read Page Dequeue</td>
<td>This value indicates the number of Read Once Workfile pages that have been dequeued for destructive read processing.</td>
</tr>
</tbody>
</table>
The Buffer Pool Snapshot Open Pagesets screen displays pageset information about specified buffer pools.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about:
- a particular pageset, move the cursor to the desired pageset name line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Pageset Name**: Name of open pagesets in the buffer pool. The pageset name consists of DBname.TSname for a tablespace, or DBname.ISname for an indexspace.
- **Pageset Type**: Pageset type, which is either tablespace or indexspace.
- **Use Count**: Number of applications currently accessing the pageset.
- **Open DS**: Number of datasets open for the pageset.
- **VP Pgs Current**: Number of pages currently in the virtual buffer pool for this dataset.
- **HP Pgs Current**: Number of pages currently cached in the hiperpool for this dataset. (Hiperpools are not supported in DB2 Version 8.1)
- **VP Pgs Changes**: Number of dirty pages currently in the virtual buffer pool for this dataset.
- **GRP Dep**: Indicates whether the object is group buffer pool dependent.
Buffer Pool Snapshot Datasets

This screen provides detailed information for each open dataset in the buffer pool.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigating

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>Buffer pool name.</td>
</tr>
<tr>
<td>Pageset Name</td>
<td>Name of the pageset.  The pageset name comprises DBname.TSname for a tablespace, or DBname.ISname for an indexspace.</td>
</tr>
<tr>
<td>Type</td>
<td>Pageset type, either tablespace or indexspace.</td>
</tr>
<tr>
<td>Open Datasets</td>
<td>Number of datasets open for the pageset.</td>
</tr>
</tbody>
</table>

The fields below appear once for each open dataset.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dataset Name</td>
<td>The name of the dataset associated with this pageset piece.</td>
</tr>
<tr>
<td>VP Pages Current</td>
<td>Number of pages currently in the virtual buffer pool for this dataset.</td>
</tr>
<tr>
<td>HP Pages Current</td>
<td>Maximum number of pages concurrently in the virtual buffer pool for this dataset - high-water mark since the last Display Bufferpool command with the LSTATS option was issued. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>VP Pages Maximum</td>
<td>Number of dirty pages currently in the virtual buffer pool for this dataset.</td>
</tr>
<tr>
<td>HP Pages Maximum</td>
<td>Maximum number of dirty pages concurrently in the virtual buffer pool for this dataset - high-water mark since the last Display Bufferpool command with the LSTATS option was issued. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
</tbody>
</table>
The following dataset statistics are available only if there was activity for the dataset since it was last displayed using the Display Bufferpool command. These values match the dataset statistics kept by DB2, which are incremented since the dataset was last displayed using the Display Bufferpool command. If all values are zero, **N/A** appears for these fields.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sync I/O Total Pages</td>
<td>Total number of pages read or written synchronously for the dataset.</td>
</tr>
<tr>
<td>Sync I/O Average Delay</td>
<td>Average synchronous I/O delay in milliseconds for pages in the dataset.</td>
</tr>
<tr>
<td>Sync I/O Maximum Delay</td>
<td>Maximum synchronous I/O delay in milliseconds for pages in the dataset.</td>
</tr>
<tr>
<td>Async I/O Average Delay</td>
<td>Average asynchronous I/O delay in milliseconds for pages in the dataset.</td>
</tr>
<tr>
<td>Async I/O Maximum Delay</td>
<td>Maximum asynchronous I/O delay in milliseconds for pages in the dataset.</td>
</tr>
<tr>
<td>Async I/O Total Pages</td>
<td>Total number of pages read or written asynchronously for the dataset.</td>
</tr>
<tr>
<td>Async I/O Total I/O Count</td>
<td>Total number of asynchronous I/Os issued for the dataset.</td>
</tr>
<tr>
<td>Group BP Dependent</td>
<td>Indicates whether the pageset or partition is dependent upon the group buffer pool from either</td>
</tr>
<tr>
<td></td>
<td>- active inter-DB2 read/write interest</td>
</tr>
<tr>
<td></td>
<td>- changed pages in the group buffer pool that have not yet been castout to DASD</td>
</tr>
<tr>
<td>Group Interest Level</td>
<td>The highest interest level of all data sharing group members interested in a pageset or partition that is in the group buffer pool. This field applies only to DB2 Version 4 in a data sharing environment. Possible values:</td>
</tr>
<tr>
<td></td>
<td>- R/O Read-only interest</td>
</tr>
<tr>
<td></td>
<td>- R/W Read/write interest (higher)</td>
</tr>
</tbody>
</table>

This field applies only to DB2 Version 4 in a data sharing environment.
The DB2 Log Manager Information screen displays information about the active logging and archiving activity of the DB2 log manager. The screen displays current statistics about log read and write activity, as well as read and write log allocations. The DB2 Log Manager Information screen also provides information regarding where DB2 is in the checkpoint cycle.

From this screen you can access the corresponding near-term history display by entering H on the top line.

**Highlighting**

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs Available</td>
<td>LOGN</td>
<td>The number of log datasets available.</td>
</tr>
<tr>
<td>Archive In Progress</td>
<td>ARCV</td>
<td>The archive log is waiting for a tape mount.</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about
- a particular log dataset, move the cursor to the log dataset name line and press the zoom key (PF11).
- near-term historical activity, choose the H option at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: This field will always display REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.
- **Start**: The start time of the report interval currently displayed.
- **Report Interval**: The amount of time in the last cycle (for example, between two presses of the Enter key).
- **End**: The end time of the report interval currently displayed.
- **Logging Mode**: The logging mode in use: DUAL or SINGLE. The logging mode is specified in the TWOACTV parameter of the DSNZPARM module.
- **Archiving Mode**: The archiving mode: DUAL or SINGLE. The archiving mode is specified in the TWOARCH parameter of the DSNZPARM module.
DB2 Log Manager Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Logs Defined</td>
<td>The number of logs defined to DB2 at installation.</td>
</tr>
<tr>
<td>Number of Logs Available</td>
<td>The number of logs available that are not archived, that is, the number that</td>
</tr>
<tr>
<td></td>
<td>are ready for use.</td>
</tr>
<tr>
<td>Checkpoint Frequency</td>
<td>The number of log records DB2 will write between checkpoints.</td>
</tr>
<tr>
<td>Records until Checkpoint</td>
<td>The number of log records to write until the next checkpoint.</td>
</tr>
<tr>
<td>Input Buffer Size</td>
<td>The size of the log buffer for reading. The buffer size is specified in the</td>
</tr>
<tr>
<td></td>
<td>INBUFF parameter of the DSNZPARM module.</td>
</tr>
<tr>
<td>Output Buffer Size</td>
<td>The size of the log buffer for writing. The buffer size is specified in the</td>
</tr>
<tr>
<td></td>
<td>OUTBUFF parameter of the DSNZPARM module.</td>
</tr>
<tr>
<td>Write Threshold</td>
<td>The number of 4K buffers that would normally be filled before a physical I/O</td>
</tr>
<tr>
<td></td>
<td>is performed. This number is specified in the WRTHRSH parameter of the</td>
</tr>
<tr>
<td></td>
<td>DSNZPARM module.</td>
</tr>
<tr>
<td>Current Log Record RBA</td>
<td>The relative byte address (RBA) of the record that was being logged at the</td>
</tr>
<tr>
<td></td>
<td>end of the interval.</td>
</tr>
<tr>
<td>Primary Active Log</td>
<td>The dataset name of the primary log.</td>
</tr>
<tr>
<td>Secondary Active Log</td>
<td>The dataset name of the second copy of a dual logged log.</td>
</tr>
<tr>
<td>Archive in Progress</td>
<td>The dataset name of the active archive log, if an archive is in progress.</td>
</tr>
</tbody>
</table>

For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reads from Output Buffers</td>
<td>The reads that were satisfied from the output buffers.</td>
</tr>
<tr>
<td>Reads from Active Log</td>
<td>The reads that were satisfied from the active log.</td>
</tr>
<tr>
<td>Reads from Archive Log</td>
<td>The reads that were satisfied from the archive log.</td>
</tr>
<tr>
<td>Reads Delayed - Allocation Limit</td>
<td>Log reads that were delayed because the limit of allocations for read archive datasets was met.</td>
</tr>
<tr>
<td>Reads Delayed - Tape Contention</td>
<td>The number of reads delayed because a tape volume was already in use.</td>
</tr>
<tr>
<td>Reads Delayed - No Tape Unit</td>
<td>Number of archive log reads that were delayed because of unavailable tape units, or because the maximum amount of read parallelism is being used (not likely).</td>
</tr>
<tr>
<td>Look-Ahead Tape Mounts Attempted</td>
<td>Number of look-ahead tape mounts attempted.</td>
</tr>
<tr>
<td>Look-Ahead Tape Mounts Performed</td>
<td>Number of successful look-ahead tape mounts.</td>
</tr>
<tr>
<td>Write NOWAIT Requests</td>
<td>The times DB2 externalized log records asynchronously.</td>
</tr>
<tr>
<td>Write FORCE Requests</td>
<td>The times DB2 externalized log records synchronously.</td>
</tr>
<tr>
<td>Write Delayed - No Buffer</td>
<td>DB2 attempts to place log records in the output buffer when no log buffer could be found.</td>
</tr>
<tr>
<td>Write Active Log Buffers</td>
<td>Calls to the log write routine.</td>
</tr>
<tr>
<td>Active Log CIs Created</td>
<td>Active log control intervals created.</td>
</tr>
<tr>
<td>Archive Log Read Allocations</td>
<td>Archive read allocations, which reflect archive log open/close activity.</td>
</tr>
<tr>
<td>Archive Log Write Allocations</td>
<td>Archive write allocations, which reflect archive log open/close activity.</td>
</tr>
<tr>
<td>Archive Log CIs Offloaded</td>
<td>Number of active log control intervals offloaded to archive data sets.</td>
</tr>
<tr>
<td>BSDS Access Requests</td>
<td>Calls to the bootstrap dataset access routine.</td>
</tr>
</tbody>
</table>
**DB2 Log Dataset Information**

The DB2 Log Dataset Information screen displays information about the activity of the DB2 log manager in the area of active logging and archival. The current statistics about log read and write activity are displayed as well as read and write log allocations. In addition, information regarding where DB2 is in the checkpoint cycle is given.

**Highlighting**

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archive In Progress For</td>
<td>ARCV</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Primary Active Log Is**: The dataset name of the active log.
- **Log Percent Used**: The percentage of the active log that has been filled.
- **Log Dataset Size**: The number of bytes in the log dataset.
- **Beginning Log RBA**: The beginning RBA address of the active log dataset.
- **Ending Log RBA**: The ending RBA address of the active log dataset.
- **Secondary Active Log Is**: The dataset name of the secondary log.
- **Log Percent Used**: The percentage of the secondary log that has been filled.
- **Log Dataset Size**: The number of bytes in the secondary log dataset.
- **Beginning Log RBA**: The beginning RBA address of the secondary log dataset.
- **Ending Log RBA**: The ending RBA address of the secondary log dataset.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Volser</td>
<td>The volume serial(s) of the secondary log dataset.</td>
</tr>
<tr>
<td>Archive In Progress For</td>
<td>The dataset name of the active archive log.</td>
</tr>
<tr>
<td>Begin RBA</td>
<td>The beginning RBA of the archive log.</td>
</tr>
<tr>
<td>End RBA to Archive</td>
<td>The last RBA to be archived.</td>
</tr>
<tr>
<td>High RBA Archived</td>
<td>The last RBA written to the archive log.</td>
</tr>
<tr>
<td>Percent Archive Complete</td>
<td>The amount of the archival that has completed.</td>
</tr>
<tr>
<td>Output Device Type</td>
<td>The device type of the archive log.</td>
</tr>
<tr>
<td>Output Volser</td>
<td>The volser(s) of the archive log.</td>
</tr>
</tbody>
</table>
EDM Pool Information

The EDM Pool Information screen provides information about the activity in and performance of the EDM pool.

From this screen you can access the corresponding near-term history display by entering H on the top line.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages In Use</td>
<td>EDMU</td>
<td>The utilization of the EDM pool has reached or exceeded its threshold.</td>
</tr>
<tr>
<td>Pct In Use</td>
<td>EDMU</td>
<td>The utilization of the EDM pool has reached or exceeded its threshold.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**Collection Interval**

This field will always display REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.

**Start**

The start time of the report interval currently displayed.

**Report Interval**

The amount of time in the last cycle (for example, between two presses of the Enter key).

**End**

The end time of the report interval currently displayed.

Pool Usage

Each of the fields described below has two values: One represents the number of pages dedicated to a type of pool usage, and the other represents the percentage of the EDM pool dedicated to that type of usage. Both figures are based on a snapshot of the data that was taken at the end of the report interval.

**In Use**

The amount of the EDM pool that was in use at the end of the interval.
For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- The interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

Also note that the column headings for the three rate columns include a count in parentheses.

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBDs</td>
<td>The amount of the EDM pool that was in use for database descriptors at the end of the interval.</td>
</tr>
<tr>
<td>CTs</td>
<td>The amount of the EDM pool that was in use for the cursor tables at the end of the interval.</td>
</tr>
<tr>
<td>PTs</td>
<td>The amount of the EDM pool that was in use for the package tables at the end of the interval.</td>
</tr>
<tr>
<td>Available</td>
<td>The amount of the EDM pool that was available at the end of the interval.</td>
</tr>
<tr>
<td>SKCTs</td>
<td>The amount of the EDM pool that was in use for skeleton cursor tables.</td>
</tr>
<tr>
<td>SKPTs</td>
<td>The amount of the EDM pool that was in use for skeleton package tables.</td>
</tr>
<tr>
<td>SQL Cache</td>
<td>The amount of the EDM pool that was in use to cache dynamic SQL.</td>
</tr>
<tr>
<td>Free</td>
<td>The total amount of EDM pool that is free storage.</td>
</tr>
<tr>
<td>Total Pages</td>
<td>The total capacity of the EDM pool.</td>
</tr>
</tbody>
</table>

Failures due to EDM Pool Full

- Database Descriptor (DBD) Reqs: Requests for database descriptors.
- DBD Loads: Database descriptors that had to be loaded from DASD.
- % of DBD Loads from DASD: The percentage of DBD requests that resulted in DT loads from DASD. This value should be kept low.
- Cursor Table (CT) Reqs: Requests for cursor tables.
- CT Loads: Cursor tables that had to be loaded from DASD.

Failures that occurred because the pool was full.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of CT Loads from DASD</td>
<td>The percentage of CT requests that resulted in CT loads from DASD. This value should be kept low.</td>
</tr>
<tr>
<td>Package Table (PT) Reqs</td>
<td>Requests for package tables.</td>
</tr>
<tr>
<td>PT Loads</td>
<td>Package tables that had to be loaded from DASD.</td>
</tr>
<tr>
<td>% of PT Loads from DASD</td>
<td>The percentage of PT requests that resulted in PT loads from DASD. This value should be kept low.</td>
</tr>
<tr>
<td>Dynamic SQL (DSC) Reqs</td>
<td>Requests to cache dynamic SQL.</td>
</tr>
<tr>
<td>DSC Loads</td>
<td>Dynamic SQL caches that had to be loaded from DASD.</td>
</tr>
<tr>
<td>% of DSC Loads into Pool</td>
<td>The percentage of dynamic SQL cache requests that resulted in DSC loads in to pool. This value should be kept low.</td>
</tr>
</tbody>
</table>
EDM Pool Snapshot Summary

The EDM Pool Snapshot Summary screen provides information about the contents of the EDM pool. This information is summarized into the following categories: database descriptors (DBDs), cursor tables (CTs), skeleton cursor tables (SKCTs), free storage, package tables (PTs), skeleton package tables (SKPTs), authorization caching (CACHE), and dynamic SQL caching (SQL CACHE).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular EDM pool, move the cursor to the desired line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen and each time you reinitiate collection by entering a hyphen (-) to the left of the EDSN command.

<table>
<thead>
<tr>
<th>EDM Storage Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBDs</td>
<td>database descriptors</td>
</tr>
<tr>
<td>CTs</td>
<td>cursor tables</td>
</tr>
<tr>
<td>PTs</td>
<td>package tables</td>
</tr>
<tr>
<td>SKCTs</td>
<td>skeleton cursor tables</td>
</tr>
<tr>
<td>CACHE</td>
<td>authorization cache storage</td>
</tr>
<tr>
<td>FREE</td>
<td>free storage</td>
</tr>
<tr>
<td>SKPTs</td>
<td>skeleton package tables</td>
</tr>
<tr>
<td>SQL CACHE</td>
<td>dynamic SQL cache storage</td>
</tr>
</tbody>
</table>

% of Pool

The percentage of the total EDM pool occupied by the storage type.

Pages Alloc

The number of pages allocated for the storage type.

Count of Entries

The number of entries in the EDM pool for the storage type. For storage type FREE, an entry represents a block of free storage.

Avg Pages Entry

The average number of pages per entry.

Max Pages Entry

The maximum number of pages used by a single entry.
EDM Snapshot Database Descriptors

The EDM Snapshot Database Descriptors screen provides information about the database descriptors (DBDs) that are using some portion of the EDM pool. One line of output is produced for each DBD that was residing in the pool when the displayed data was collected.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

- **DBD Name**: The name of a DBD that resided in the EDM pool when the displayed data was collected.
- **Pages Alloc**: The number of pages allocated for the DBD.
- **DBD Size**: The actual size (in bytes) of the DBD.
EDM Snapshot Cursor Tables

The EDM Snapshot Cursor Tables screen provides information about the cursor tables (CTs) that are using some portion of the EDM pool. One line of output is produced for each CT that was residing in the pool when the displayed data was collected.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planname</td>
<td>The name of a plan that owns a CT that resides in the EDM pool.</td>
</tr>
<tr>
<td>Connid</td>
<td>The connection ID of a thread that owns a CT.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The correlation ID of a thread that owns a CT.</td>
</tr>
<tr>
<td>Authid</td>
<td>The authorization ID of a thread that owns a CT.</td>
</tr>
<tr>
<td>Pages Alloc</td>
<td>The number of CT pages allocated for the thread.</td>
</tr>
<tr>
<td>Bytes Used</td>
<td>The number of bytes actually in use by the CTs that are owned by the thread.</td>
</tr>
</tbody>
</table>
EDM Snapshot Skeleton Cursor Tables

The EDM Snapshot Skeleton Cursor Tables screen provides information about the skeleton cursor tables (SKCTs) that are using some portion of the EDM pool. One line of output is produced for each SKCT that was residing in the pool when the displayed data was collected.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

- **Plannname**: The name of a plan that owns an SKCT that resides in the EDM pool.
- **Pages Alloc**: The number of SKCT pages that are allocated for the plan.
- **Bytes Used**: The number of bytes actually in use by the SKCT that is owned by the plan.
EDM Snapshot Package Table Summary

The EDM Snapshot Package Table Summary screen provides summary information for package tables (PTs) that are using some portion of the EDM pool. One line of output is produced for each active thread located that is using PT storage.

To sort output by display column move the cursor under the desired display column headings and press the sort key (PF10).

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about
- package tables in use by the thread, move the cursor to the desired line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planname</td>
<td>The thread planname that owns package table storage within the EDM pool.</td>
</tr>
<tr>
<td>Connid</td>
<td>The thread connection identifier that owns package table storage within the EDM pool.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The thread correlation identifier that owns package table storage within the EDM pool.</td>
</tr>
<tr>
<td>Package Count</td>
<td>The number of package tables in use by the thread.</td>
</tr>
<tr>
<td>Pages Alloc</td>
<td>The number of EDM pages allocated for package tables in use by the thread.</td>
</tr>
<tr>
<td>Avg Pages Package</td>
<td>The average number of EDM pages used by a single package table in use by the thread.</td>
</tr>
<tr>
<td>Max Pages Package</td>
<td>The maximum number of EDM pages used by a single package table in use by the thread.</td>
</tr>
<tr>
<td>Bytes Used</td>
<td>The number of bytes actually used within the EDM pages allocated for package tables in use by the thread.</td>
</tr>
</tbody>
</table>
EDM Snapshot Skeleton Package Table Summary

The EDM Snapshot Skeleton Package Table Summary screen provides information about the skeleton package tables (SKPTs) that are using some portion of the EDM pool. One line of output is produced for each SKPT collection identifier located in the pool when the display data was collected.

To sort output by display column move the cursor under the desired display column heading and press the sort key (PF10).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- detailed skeleton package table information, move the cursor to the desired line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection ID</td>
<td>The collection identifier located in the pool. This value was specified when the package tables were bound.</td>
</tr>
<tr>
<td>Package Count</td>
<td>The number of skeleton package tables located in the pool containing the collection identifier.</td>
</tr>
<tr>
<td>Pages Alloc</td>
<td>The total number of EDM pool pages allocated for skeleton package tables containing the collection identifier.</td>
</tr>
<tr>
<td>Avg Pages Package</td>
<td>The average number of EDM pages per skeleton package table for the collection identifier.</td>
</tr>
<tr>
<td>Max Pages Package</td>
<td>The size of the largest skeleton package table in the EDM pool for the collection identifier.</td>
</tr>
<tr>
<td>Bytes Used</td>
<td>The number of bytes actually in use by skeleton package table information within the EDM pool pages allocated for the collection identifier.</td>
</tr>
</tbody>
</table>
EDM Snapshot Authorization Cache Storage

The EDM Snapshot Authorization Cache Storage screen provides information about DB2 authorization cache storage residing in the EDM pool. One line of output is produced for each planname which has authorization cache storage allocated at the time the display data was collected. DB2 uses authorization cache storage to cache frequently used authids, thus enabling authorization processing to be bypassed. As a result, processing costs associated with signon processing can be minimized. The size of cache storage may be specified when a plan is bound.

To sort output by display column move the cursor under the desired display column heading and press the sort key (PF10).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON collects data and refreshes the panel each time you navigate to the panel.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cache Pages Allocated</td>
<td>The total number of cache pages allocated in the EDM pool.</td>
</tr>
<tr>
<td>Total Cache Pages Used</td>
<td>The total number of cache pages that contain authorization data enabling authorization to be bypassed.</td>
</tr>
<tr>
<td>Total Number of Plans Cached</td>
<td>The total number of plans that have cache storage allocated.</td>
</tr>
<tr>
<td>Percent of Cache Used</td>
<td>The percentage of total cache storage containing authorization ID information.</td>
</tr>
<tr>
<td>Plannname</td>
<td>The planname that has cache storage allocated in the EDM pool.</td>
</tr>
<tr>
<td>Cache Size</td>
<td>The number of EDM bytes allocated for cache storage for the plan.</td>
</tr>
<tr>
<td>% Used</td>
<td>The percentage of cache storage for the plan in use that contains authorization ID information.</td>
</tr>
</tbody>
</table>
Dynamic SQL Cache by Authid

The Dynamic SQL Cache by Authid screen provides information about the dynamic SQL cache. One line of output is produced for each authorization identifier (Auth ID) located in the cache when the display data was collected.

To sort output by display column move the cursor under the desired display column heading and press the sort key (PF10).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- detailed dynamic SQL cache information for an authorization ID, move the cursor to the desired line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auth ID</td>
<td>The authorization identifier of the user that caused the dynamic SQL statement to be cached.</td>
</tr>
<tr>
<td>Entries</td>
<td>The number of dynamic SQL statements cached for each authorization ID.</td>
</tr>
<tr>
<td>Pages Alloc</td>
<td>The total number of EDM pool pages allocated for dynamic SQL statements for each authorization ID.</td>
</tr>
<tr>
<td>Bytes Used</td>
<td>The total number of bytes in use for dynamic SQL statements associated with each authorization ID.</td>
</tr>
</tbody>
</table>
Dynamic SQL Cache Statistics

The Dynamic SQL Cache Statistics screen provides additional details about the dynamic SQL cache. One line of output is produced for each unique dynamic SQL statement. To sort output by display column move the cursor under the desired display column heading and press the sort key (PF10).

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- the dynamic SQL statement and statistics, move the cursor to the desired line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Times Exec.</td>
<td>The number of times that an SQL statement in cache was executed. For a cursor statement, this number represents the number of OPENs.</td>
</tr>
<tr>
<td>CPU Time</td>
<td>The amount of accumulated CPU time used while executing in DB2.</td>
</tr>
<tr>
<td>Elapsed Time</td>
<td>The accumulated elapsed time for the SQL statement.</td>
</tr>
<tr>
<td>Wait Time</td>
<td>The accumulated time spent waiting in DB2 for all causes.</td>
</tr>
<tr>
<td>Get - Pages</td>
<td>The number of getpage requests performed for the SQL statement.</td>
</tr>
<tr>
<td>Sync Reads</td>
<td>The number of synchronous buffer reads performed for the SQL statement.</td>
</tr>
<tr>
<td>Sync Writes</td>
<td>The number of synchronous buffer writes performed for the SQL statement.</td>
</tr>
</tbody>
</table>
The EDM Snapshot Dynamic SQL Cache SQL Detail screen provides additional information about a dynamic SQL cache (DSC) selected from the EDM Snapshot Dynamic SQL Cache summary screen.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

To see the statistics for a particular SQL statement, place the cursor on the line where the SQL statement appears, then press the zoom key (PF11).

For additional information about other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

- **Authorization ID**: The authorization identifier of the user that caused the dynamic SQL statement to be cached.
- **Pages**: The total number of EDM pool pages allocated for dynamic SQL caches for each SQL statement.
- **SQL text**: The text of each SQL statement.
EDM Snapshot Dynamic SQL Cache Statistics

EDM Snapshot Dynamic SQL Cache Statistics screen provides additional detail about a particular SQL statement.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

Times Executed  The number of times the SQL statement has been executed. For a cursor statement, this number represents the number of OPENs.

Synchronous Buffer Reads  The number of synchronous buffer reads performed for the SQL statement.

Getpages  The number of getpages performed for the SQL statement.

Rows Examined  The number of rows examined for the SQL statement.

Rows Processed  The number of rows processed for the SQL statement. For example, the number of rows returned for a SELECT, or the number of rows affected by an INSERT, UPDATE, or DELETE.

Sorts Performed  The number of sorts performed for the SQL statement.

Index Scans  The number of index scans performed for the SQL statement.

Tablespace Scans  The number of tablespace scans performed for the SQL statement.

Parallel Groups Created  The number of parallel groups created for the SQL statement.

Synchronous Writes  The number of synchronous buffer write operations performed for the SQL statement.

Elapsed Time  The accumulated elapsed time used for the SQL statement.

CPU Time  The accumulated CPU time for the SQL statement.

Note:  The following wait time fields are only collected when accounting trace class (3) is active.

Wait for Synch I/O  The accumulated wait time for synchronous I/O operations.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait for Lock/Latch</td>
<td>The accumulated wait time for lock and latch requests.</td>
</tr>
<tr>
<td>Synch Exec Switch</td>
<td>The accumulated wait time for synchronous execution unit switch.</td>
</tr>
<tr>
<td>Wait for Global Locks</td>
<td>The accumulated wait time for global locks.</td>
</tr>
<tr>
<td>Wait Othr Thread Read</td>
<td>The accumulated wait time for read activity performed by another thread.</td>
</tr>
<tr>
<td>Wait Othr Thread Write</td>
<td>The accumulated wait time for write activity performed by another thread.</td>
</tr>
<tr>
<td>Isolation Bind</td>
<td><strong>ISOLATION BIND</strong> is in effect on initial <strong>PREPARE</strong>; it does not reflect <strong>ISOLATION</strong> specified in the <strong>WITH</strong> clause</td>
</tr>
<tr>
<td></td>
<td><strong>UR</strong>: <strong>ISOLATION(UR)</strong> Uncommitted Read</td>
</tr>
<tr>
<td></td>
<td><strong>CS</strong>: <strong>ISOLATION(CS)</strong> Cursor stability</td>
</tr>
<tr>
<td></td>
<td><strong>RS</strong>: <strong>ISOLATION(RS)</strong> Read stability</td>
</tr>
<tr>
<td></td>
<td><strong>RR</strong>: <strong>ISOLATION(RR)</strong> Repeatable read</td>
</tr>
<tr>
<td>Currentdata Bind</td>
<td>The status of the <strong>CURRENTDATA BIND</strong> option:</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENTDATA(YES)</strong></td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENTDATA(NO)</strong></td>
</tr>
<tr>
<td>Dynamic rules Bind</td>
<td>The status of the <strong>DYNAMICRULES BIND</strong> option:</td>
</tr>
<tr>
<td></td>
<td>- <strong>DYNAMICRULES(BIND)</strong></td>
</tr>
<tr>
<td></td>
<td>- <strong>DYNAMICRULES(RUN)</strong></td>
</tr>
<tr>
<td>Current Degree</td>
<td>The status of <strong>CURRENT DEGREE</strong> special register value:</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENT DEGREE</strong> = ‘ANY’</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENT DEGREE</strong> = ‘1’</td>
</tr>
<tr>
<td>Current Rules</td>
<td>The status of <strong>CURRENT RULES</strong> special register value:</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENT RULES</strong> = ‘DB2’</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENT RULES</strong> = ‘SQL’</td>
</tr>
<tr>
<td>Current Precision</td>
<td>The status of <strong>CURRENT PRECISION</strong> special register value:</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENT PRECISION</strong> = ‘DEC31’</td>
</tr>
<tr>
<td></td>
<td>- <strong>CURRENT PRECISION</strong> = ‘DEC15’</td>
</tr>
<tr>
<td>Cursor Hold</td>
<td>If YES, the statement was prepared for a held cursor. If NO, the statement was not prepared for a held cursor.</td>
</tr>
</tbody>
</table>
**EDM Snapshot Free Storage**

The EDM Snapshot Free Storage screen provides information about the free storage that is currently available (as of the time of data collection) in the EDM pool.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. Each field reflects the data that was available when collection was executed. OMEGAMON II collects data and refreshes the screen each time you navigate to the screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total EDM Free Pages</td>
<td>The number of pages of free storage that were available in the EDM pool when the displayed data was collected.</td>
</tr>
<tr>
<td>Total EDM Free Entries</td>
<td>The number of free storage entries that were available when the displayed data was collected.</td>
</tr>
<tr>
<td>Largest Contiguous Free Entries</td>
<td>The number of pages in each of the largest contiguous free storage entries in the EDM pool when the displayed data was collected. (Displays up to 5 values.)</td>
</tr>
</tbody>
</table>
Bind Statistics

The Bind Statistics screen displays bind operation counts. For example, the number of automatic binds, automatic bind failures, static binds, and static bind failures.

From this screen you can access the corresponding near-term history display by entering H on the top line.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- near-term historical activity, choose the H option at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field will always display REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the report interval currently displayed.</td>
</tr>
</tbody>
</table>

For each field described below, five statistics are provided:
- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

Also note that the column headings for the three rate columns include a count in parentheses.
- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automatic Bind Plan Attempts</strong></td>
<td>DB2's attempts to perform an automatic bind of a plan.</td>
</tr>
<tr>
<td><strong>Automatic Bind Plan Successes</strong></td>
<td>DB2's successful attempts to perform an automatic bind of a plan.</td>
</tr>
<tr>
<td><strong>Automatic Bind Pkg Attempts</strong></td>
<td>DB2's attempts to perform an automatic bind of a package.</td>
</tr>
<tr>
<td><strong>Automatic Bind Pkg Successes</strong></td>
<td>DB2's successful attempts to perform an automatic bind of a package.</td>
</tr>
<tr>
<td><strong>Static Bind Plan Attempts</strong></td>
<td>Represents the bind subcommands issued; includes Bind Add and Bind Replace subcommands.</td>
</tr>
<tr>
<td><strong>Static Bind Plan Successes</strong></td>
<td>Represents the bind subcommands that succeeded.</td>
</tr>
<tr>
<td><strong>Static Bind Pkg Attempts</strong></td>
<td>Represents the bind package subcommands issued; includes Bind Package Add and Bind Package Replace subcommands.</td>
</tr>
<tr>
<td><strong>Static Bind Pkg Successes</strong></td>
<td>Represents the bind package subcommands that succeeded.</td>
</tr>
<tr>
<td><strong>Rebind Plan Attempts</strong></td>
<td>Attempts to rebind a plan.</td>
</tr>
<tr>
<td><strong>Rebind Plan Successes</strong></td>
<td>Successful attempts to rebind a plan.</td>
</tr>
<tr>
<td><strong>Rebind Pkg Attempts</strong></td>
<td>Attempts to rebind a package.</td>
</tr>
<tr>
<td><strong>Rebind Pkg Successes</strong></td>
<td>Successful attempts to rebind a package.</td>
</tr>
<tr>
<td><strong>Free Plan Attempts</strong></td>
<td>Attempts to free a plan.</td>
</tr>
<tr>
<td><strong>Free Plan Successes</strong></td>
<td>Successful attempts to free a plan.</td>
</tr>
<tr>
<td><strong>Free Pkg Attempts</strong></td>
<td>Attempts to free a package.</td>
</tr>
<tr>
<td><strong>Free Pkg Successes</strong></td>
<td>Successful attempts to free a package.</td>
</tr>
<tr>
<td><strong>Plan Allocation Attempts</strong></td>
<td>The attachment facility's requests to DB2 to allocate a bound plan for a user.</td>
</tr>
<tr>
<td><strong>Plan Allocation Successes</strong></td>
<td>Successful plan allocation attempts.</td>
</tr>
<tr>
<td><strong>Package Allocation Attempts</strong></td>
<td>The attachment facility's requests to DB2 to allocate a bound package for a user.</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Package Allocation</td>
<td>Successful package allocation attempts.</td>
</tr>
<tr>
<td>Auth Check Attempts</td>
<td>Authorization checks for all plans.</td>
</tr>
<tr>
<td>Auth Check Successes</td>
<td>Successful authorization checks.</td>
</tr>
<tr>
<td>Auth Check Using Cache</td>
<td>Successful authorization checks that were performed using cache.</td>
</tr>
<tr>
<td>Auth Check Public Authority</td>
<td>Successful authorization checks that were performed based upon execute authority granted to public.</td>
</tr>
<tr>
<td>Test Binds (No Plan ID)</td>
<td>Bind subcommands that were issued without a plan ID.</td>
</tr>
</tbody>
</table>
DB2 Subsystem Support Manager Statistics

The DB2 Subsystem Support Manager Statistics screen allows you to view workload-related information about the DB2 subsystem you are monitoring. The screen includes statistics related to create thread, signon, commit, and abnormal termination activity.

From this screen you can access the corresponding near-term history display by entering H on the top line.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- near-term historical activity, choose the H option at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field will always display REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the report interval currently displayed.</td>
</tr>
</tbody>
</table>

For each field described below, three statistics are provided:

- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second, which is the rate at which activity occurred during the last cycle.
Also note that the /SECOND column heading includes a count of the number of seconds that made up the interval/cycle.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Requests</td>
<td>Successful connections to DB2 from an allied address space.</td>
</tr>
<tr>
<td>Signon Requests</td>
<td>Successful requests to identify a new user for IMS or CICS. Thread signon processing is applicable only in CICS-DB2 and IMS-DB2 attachment environments.</td>
</tr>
<tr>
<td>Create Thread Requests</td>
<td>Successful create thread requests.</td>
</tr>
<tr>
<td>Create Thread Waits</td>
<td>Create thread requests that had to wait because no thread was available.</td>
</tr>
<tr>
<td>Terminate Thread Requests</td>
<td>Successful thread terminations.</td>
</tr>
<tr>
<td>Single Phase Commit Requests</td>
<td>Successful commit requests that took place in a single-phase commit environment, for example, TSO.</td>
</tr>
<tr>
<td>Read Only Commit Requests</td>
<td>Commit requests that were read-only. Each of these requests increments the statistics field for phase 1 commits as well as the statistics field for read-only commits.</td>
</tr>
<tr>
<td>Commit Phase 1 Requests</td>
<td>Commit phase 1 requests in a two-phase commit environment, for example, CICS and IMS.</td>
</tr>
<tr>
<td>Commit Phase 2 Requests</td>
<td>Commit phase 2 requests in a two-phase commit environment, for example, CICS and IMS.</td>
</tr>
<tr>
<td>Abort Requests</td>
<td>Events that resulted in successfully backing out a unit of recovery.</td>
</tr>
<tr>
<td>Total Commit Requests</td>
<td>Includes single-phase, read-only, and phase 2 commit requests.</td>
</tr>
<tr>
<td>Indoubt Threads</td>
<td>A thread goes indoubt in the CICS/IMS attachment to DB2 when one of the two subsystems goes down between commit phase 1 and commit phase 2.</td>
</tr>
<tr>
<td>Indoubts Resolved</td>
<td>Successful resolutions, either automatic or manual, of indoubt threads.</td>
</tr>
<tr>
<td>Abends Detected - End of Task</td>
<td>Tasks that abended while connected to DB2.</td>
</tr>
<tr>
<td>Abends Detected - End of Memory</td>
<td>The number of times a non-DB2 address space was deleted by MVS while connected to DB2.</td>
</tr>
</tbody>
</table>
Active Trace Summary

The Active Trace Summary screen provides information about the DB2 traces that are currently active. Each active trace is listed along with identifying data, such as type, class, and destination.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular trace, move the cursor to a trace information line and press the zoom key (PF11).
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>The trace type.</td>
</tr>
<tr>
<td>TNO</td>
<td>The internal DB2 trace number assigned to the trace.</td>
</tr>
<tr>
<td>Trace Class</td>
<td>The active trace class(es) that are in use by this trace entry.</td>
</tr>
<tr>
<td>Destination</td>
<td>The destination(s) in use by this trace entry.</td>
</tr>
<tr>
<td>Planname</td>
<td>The planname used to qualify the trace. If the trace was not qualified with a planname, this field will contain an asterisk (*).</td>
</tr>
<tr>
<td>Authid</td>
<td>The authorization identifier used to qualify the trace. If the trace was not qualified with an authid, this field will contain an asterisk (*).</td>
</tr>
</tbody>
</table>
Active Trace Detail

The Active Trace Detail screen allows you to analyze DB2 trace activity at a detailed (IFCID) level. It shows you which traces are active and who started them, if the initiator used the instrumentation facility interface (IFI). It also allows you to determine how much overhead was incurred by examining the IFCIDs (trace points) involved in the traces.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace Number (TNO)</td>
<td>The internal DB2 trace number assigned to the trace.</td>
</tr>
<tr>
<td>Trace Planname</td>
<td>The plan name used to qualify the trace. If the trace was not qualified with a planname, this field will contain an asterisk (*).</td>
</tr>
<tr>
<td>Trace Type</td>
<td>The trace type.</td>
</tr>
<tr>
<td>Trace Authid</td>
<td>The authorization identifier used to qualify the trace. If the trace was not qualified with an authid, this field will contain an asterisk (*).</td>
</tr>
<tr>
<td>Trace Destination</td>
<td>The destination(s) assigned to the trace on this line.</td>
</tr>
<tr>
<td>Trace Rmids</td>
<td>The resource manager IDs (RMIDs) specified when the trace was started. If the trace was qualified with no RMIDs, this field will contain an asterisk (*).</td>
</tr>
<tr>
<td>Trace Classes</td>
<td>The active trace class(es) on this trace.</td>
</tr>
<tr>
<td>Trace Location</td>
<td>The location name used to qualify the remote trace. If the trace was not qualified with a location, this field will contain an asterisk (*).</td>
</tr>
<tr>
<td>Trace Tdata</td>
<td>The trace headers that are in use by this trace entry.</td>
</tr>
</tbody>
</table>

Miscellaneous Trace Information

The fields described below will be displayed when the Trait Destination field contains an OPx destination.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOBNAME</td>
<td>The jobname that started the trace.</td>
</tr>
<tr>
<td>ASID</td>
<td>The address space ID of the job that started the trace.</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>The plan name of the thread that is using the OPx destination.</td>
</tr>
</tbody>
</table>
**AUTHID**  
The authorization ID of the thread that started the trace.

For active trace requests in use by OMEGAMON II, the authorization ID is that 
of the O2CI address space, not the authorization ID of the user issuing the start 
trace request.

**CONNID**  
The connection ID of the thread that is using the OPx destination.

**CORRID**  
The correlation ID of the thread that is using the OPx destination.

**BUFSIZE**  
The bufsize value used when the trace was started.

---

**IFCID Information**

<table>
<thead>
<tr>
<th>Total IFCIDs</th>
<th>The total number of trace IFCIDs activated by the trace entry.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td></td>
</tr>
<tr>
<td>IFCID</td>
<td>The number of an active IFCID.</td>
</tr>
<tr>
<td>Description</td>
<td>The description of the IFCID on this line.</td>
</tr>
</tbody>
</table>
IRLM Startup Options and CSA Usage

The IRLM Startup Options and CSA Usage screen displays the IRLM’s startup options and current common storage (CSA/ECSA) usage.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRLM Proc</td>
<td>The MVS jobname associated with the IRLM address space.</td>
</tr>
<tr>
<td>IRLM Subsys</td>
<td>The IRLM MVS subsystem name.</td>
</tr>
<tr>
<td>Cross Memory</td>
<td>OMEGAMON II displays YES if IRLM is using cross memory services to communicate with the attached subsystems. NO appears if IRLM is using common storage (CSA/ECSA) for all locking requests. You can override this option at IRLM startup using the PC= parameter</td>
</tr>
<tr>
<td>Identifier</td>
<td>The IRLM identifier specified at startup.</td>
</tr>
<tr>
<td>Deadlock Time</td>
<td>The length of a local deadlock detection cycle, i.e., the number of seconds that will elapse before the IRLM will check for deadlocks on a single DB2 subsystem.</td>
</tr>
<tr>
<td>Deadlock Cycle</td>
<td>The number of local deadlock detection cycles that will elapse before the IRLM will perform a global deadlock check on all the subsystems that are using that IRLM.</td>
</tr>
<tr>
<td>Maximum ECSA</td>
<td>The maximum amount of CSA/ECSA that IRLM can use if IRLMPC = NO. (See the Cross Memory field.)</td>
</tr>
<tr>
<td>Current Used ECSA</td>
<td>The amount of CSA/ECSA that IRLM is currently using.</td>
</tr>
<tr>
<td>High Water Mark ECSA</td>
<td>The largest amount of CSA/ECSA that IRLM has used since startup.</td>
</tr>
<tr>
<td>Current Percentage ECSA</td>
<td>The percentage of Maximum ECSA that IRLM is currently using.</td>
</tr>
<tr>
<td>Subsystems Sharing IRLM</td>
<td>The number of subsystems using the IRLM.</td>
</tr>
<tr>
<td>IRLM Internal Trace</td>
<td>The status of the internal trace (extremely high overhead). OMEGAMON II displays ON if the trace is turned on; OFF means that the trace is turned off. This option is specified at IRLM startup using the ITRACE parameter.</td>
</tr>
</tbody>
</table>
Data Sharing Options

**XCF Group Name**  The name of the cross-system coupling facility (XCF) group in which this IRLM belongs. This option is specified at IRLM startup using the `GROUP=` parameter.

**Max Users**  The maximum number of systems in the data sharing group. This option is specified at IRLM startup using the `MAXUSRS=` parameter. It is used to determine the size of each hash entry in the global lock structure.
The Stored Procedures Start-Up Options screen displays information about the STEPLIB concatenation of the stored procedures address space. A stored procedure is a user-written DB2 application program that is invoked with the SQL CALL statement in a local or remote DB2 application. It allows a series of SQL statements to be processed with a single send/receive operation and within the same unit of work. It executes under the DB2 thread of the calling SQL application, in the DB2 stored procedures address space. This screen appears only for DB2 Version 4 and above.

OMEGAMON II does not highlight any fields on this screen.

For additional information about related topics, choose one of the options on the top of the screen. Other topics, use the OMEGAMON II PF keys.

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAS Procedure Name</td>
<td>The MVS jobname associated with the stored procedures address space.</td>
</tr>
<tr>
<td>Number of TCBs</td>
<td>The number of SQL CALL statements that can be processed concurrently. This option is specified at stored procedures using the NUMTCB parameter.</td>
</tr>
<tr>
<td>Concat</td>
<td>The concatenated dataset name.</td>
</tr>
<tr>
<td>VOLSER</td>
<td>Serial number of the volume on which data is to reside.</td>
</tr>
<tr>
<td>DSNName</td>
<td>Dataset name.</td>
</tr>
</tbody>
</table>
DSNZPARM Thread Parameters

The DSNZPARM Thread Parameters screen displays information about the DB2 system–related installation parameters in the DSNZPARM module.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNZPARM Module</td>
<td>The name of the DSNZPARM module specified for DB2 startup and the date on which this module was assembled.</td>
</tr>
<tr>
<td>Initial Module</td>
<td>The name of the initial DSNZPARM load module.</td>
</tr>
<tr>
<td>Previous Module</td>
<td>The name of the previous DSNZPARM load module.</td>
</tr>
</tbody>
</table>

**Note:** Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Concurrent</td>
<td>The maximum number of concurrent threads that may be active in DB2, from all sources.</td>
</tr>
<tr>
<td>(CTHREAD)</td>
<td></td>
</tr>
<tr>
<td>Max Batch Connections</td>
<td>The maximum number of batch (background) jobs that may access DB2 at one time.</td>
</tr>
<tr>
<td>Max TSO Users</td>
<td>The maximum number of TSO foreground users that may access DB2 at one time.</td>
</tr>
<tr>
<td>(MAXDBAT)</td>
<td>The maximum number of distributed database access threads (DBATs) that can be concurrently active on the DB2 subsystem.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>IMS/BMPTOut</strong> (BMPTOUT)</td>
<td>The timeout multiplier for IMS BMP batch connections. This factor is used to determine the number of resource timeout values that an IMS BMP region will wait for the release of</td>
</tr>
<tr>
<td></td>
<td>- a lock</td>
</tr>
<tr>
<td></td>
<td>- all claims on a resource for particular claim class</td>
</tr>
<tr>
<td></td>
<td>A value from 0 - 254 is acceptable. A zero means use the default (4).</td>
</tr>
<tr>
<td><strong>Max DB Concurrent DBATs</strong> (CONDBAT)</td>
<td>Maximum number of concurrent database access threads (DBATs), including inactive threads.</td>
</tr>
<tr>
<td><strong>IMS/DLITOut</strong> (DLITOUT)</td>
<td>The IMS DL/I timeout factor. This is the timeout multiplier for IMS/DLI batch connections. A value from 0 - 254 is acceptable. A zero means use the default (6).</td>
</tr>
<tr>
<td><strong>Single Byte CCSID</strong></td>
<td>Coded character set identifier for Single Byte Character Set. (DB2 Version 8 and above).</td>
</tr>
<tr>
<td><strong>Double Byte CCSID</strong></td>
<td>Coded character set identifier for Double Byte Character Set. (DB2 Version 8 and above).</td>
</tr>
<tr>
<td><strong>Mixed Byte CCSID</strong></td>
<td>Coded character set identifier for Mixed Byte Character Set. (DB2 Version 8 and above).</td>
</tr>
</tbody>
</table>

**New Function Mode Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Function Mode</strong></td>
<td>Specifies whether or not New Function Mode is enabled.</td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td>Version 8 or above is running in New Function Mode with UNICODE and long field names enabled.</td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td>DB2 Version 8 or above is running in Version 7 Compatibility Mode and the DB2 Catalog may be shared with DB2 Version 7 sub-systems.</td>
</tr>
<tr>
<td><strong>IFCIDS In UNICODE</strong></td>
<td>Specifies the output for IFC records.</td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td>Specifies that the output from IFC records should include Unicode information.</td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td>Specifies that the output from IFC records should be in EBCDIC.</td>
</tr>
</tbody>
</table>

**Miscellaneous Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Divide Option</strong> (DECDIV3)</td>
<td>Specifies that DB2 should display at least three digits to the right of the decimal point as the result of a divide. The default is YES.</td>
</tr>
<tr>
<td><strong>Change Data Capture</strong> (CHGDC)</td>
<td>Specifies whether change data capture is enabled.</td>
</tr>
<tr>
<td><strong>WTO Routing</strong> (ROUTCDE)</td>
<td>The routing codes used to send unsolicited DB2 messages to the system console.</td>
</tr>
</tbody>
</table>
Enable DPROP (EDPROP)  
Specifies whether you want to use the data propagator (DPROP) to propagate SQL changes made to tables defined with data capture changes.

Site Type (SITETYP)  
Specifies whether this site is

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local</strong></td>
<td>Local DB2 site</td>
</tr>
<tr>
<td><strong>Recovery</strong></td>
<td>Alternative DB2 site for recovery purposes</td>
</tr>
</tbody>
</table>

3990-3 Seq Cache (SEQCACH)  
Specifies whether to use sequential mode to read cached data from a 3990-3 device.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BYPASS</strong></td>
<td>Does not use sequential mode to read cached data. (This value is NO for DB2 Version 3.)</td>
</tr>
<tr>
<td><strong>SEQ</strong></td>
<td>Uses sequential mode to read cached data. (This value is YES for DB2 Version 3.)</td>
</tr>
</tbody>
</table>

Automatic Rebind (ABIND)  
Specifies whether plans or packages are enabled during automatic rebound.

Automatic Rebind Explain (ABEXP)  
Specifies whether Explain processing is enabled during automatic rebind.

CacheDynSql (CACHEDYN)  
Specifies whether to save prepared, dynamic SQL statements for later use by eligible application processes.

PackageAuth Cache (CACHEPAC)  
Package Authorization Cache specifies how much storage to allocate for the caching of the authorization information of all packages on this DB2 member.

CurDegSpeReg (CDSSRDEF)  
Specifies the CURRENT DEGREE special register to set query parallelism.

Describe Sqlda (DESCSTAT)  
If the DESCSTAT subsystem parameter is YES in the installation job, applications from a requesting system can execute SQL DESCRIBE statements that appear as extended dynamic SQL statements in the requesting system, but appear as static SQL in the authorization information for packages on this DB2 member.

MaxKptDynSql (MAXKEEPD)  
Specifies the total number of dynamic, prepared SQL statements to be saved past a commit point.

RelCurW/Hold (RELCURHL)  
Release Cursor With Hold specifies whether an unnecessary cursor position lock is released or kept after commit on a cursor defined as With_Hold.

UtilCacheOpt (SEQPRES)  
Specifies whether utilities that perform a scan of a non-partitioned index followed by an update of a subset of the pages in the index allow data to remain in 3990 cache longer when reading data.

ExtSecurity (EXTSEC)  
The extended security option determines the content of an error message returned to a network client when a DDF connection request fails due to security errors. By specifying **YES**, a network client receives detailed reason codes and can update RACF password via DRDA. If **NO**, a generic error code is returned and the user cannot update RACF password via DRDA. The default is **NO**.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max DBM1 stg for log (LOGAPSTG)</td>
<td>Maximum dsn1dbm1 storage in megabytes to be used by fast log apply. This is used during the log apply process of the recover utility. Valid values are 0 - 110 (m). The default is 0.</td>
</tr>
<tr>
<td>Default WLM environment (WLMENV)</td>
<td>The WLM default environment for user-defined functions or stored procedures when not specified on Create Function or Create Procedure. Valid value is a string with a maximum of 18 characters. The default is blank.</td>
</tr>
<tr>
<td>Default BP for indexes (IDXBOOPL)</td>
<td>Specifies the default buffer pool to be used by indexes. Valid values are the 4K buffer pools (BP0 through BP49). The default is BP0.</td>
</tr>
<tr>
<td>Default BP for user data (TBSBOOPL)</td>
<td>Specifies the default buffer pool to be used for tablespaces. Valid values are the 4K buffer pools (BP0 through BP49). The default is BP0.</td>
</tr>
<tr>
<td>Limit restart backout (LBACKOUT)</td>
<td>(Applies only to non-data-sharing environment.) Specifies whether some backward log processing should be postponed during a DB2 restart. <strong>NO</strong> indicates that DB2 backward processing should process all inflight and inabort units of recovery. <strong>YES</strong> postpones processing for some units of work until you issue a “recover postponed” command. <strong>AUTO</strong> postpones some backout processing but automatically starts the backout processing when DB2 has restarted and begun accepting new work. With <strong>YES</strong> or <strong>AUTO</strong>, backout processing runs concurrently with new work.</td>
</tr>
<tr>
<td>Restart backout limit (BACKODUR)</td>
<td>(Applies only to non-data-sharing environment.) Specifies an integer that serves as a multiplier. The resulting integer indicates how much log to process for backout when limit backout (LBACKOUT) is <strong>YES</strong> or <strong>AUTO</strong>.</td>
</tr>
<tr>
<td>Ext query blks DB2 server (EXTRAREQ)</td>
<td>Specifies the maximum number of extra DRDA query blocks that DB2 requests from a remote DRDA server. Valid values are 1 - 100. The default is 100.</td>
</tr>
<tr>
<td>Ext query blks DB2 requester (EXTRASRV)</td>
<td>Specifies the maximum number of extra DRDA query blocks that DB2 returns to a DRDA client. Valid values are 1 - 100. The default is 100.</td>
</tr>
<tr>
<td>Stg for lob - per system (LOBVALA)</td>
<td>Specifies an integer that establishes an upper limit for the amount of storage each user can be used for storing lob values (in kilobytes).</td>
</tr>
<tr>
<td>Stg for lob - per agent (LOBVALS)</td>
<td>Specifies an integer that establishes an upper limit for the amount of storage per system that can have for storing lob values (in megabytes).</td>
</tr>
</tbody>
</table>
DSNZPARM Trace Parameters

The DSNZPARM Trace Parameters screen displays information about the automatic startup of traces in DB2.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>GTRC</td>
<td>The global trace is active.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **DSNZPARM Module**: The DSNZPARM module name specified for DB2 startup and the date on which this module was assembled.
  
  **Note**: Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.

- **Initial Module**: The name of the initial DSNZPARM load module.
  
  **Note**: This applies for DB2 Version 7.1 and above.

- **Previous Module**: The name of the previous DSNZPARM load module.
  
  **Note**: This applies for DB2 Version 7.1 and above.

- **Type**: The type of trace:
  
  - **Global**: The global trace facility automatic startup mode.
  - **Stat**: The statistics trace with data going to SMF.
  - **Acctg**: The accounting trace with data going to SMF.
  - **Audit**: The audit trace.
  - **Monitor**: The monitor trace.

- **Auto Start**: Indicates if DB2 started the trace automatically.
<table>
<thead>
<tr>
<th>Trace Class(es)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>OMEGAMON II displays YES if DB2 started the global trace automatically or NO if DB2 did not start the global trace automatically.</td>
</tr>
<tr>
<td>Stat</td>
<td>OMEGAMON II displays YES if DB2 started sending statistics information to SMF automatically at startup or NO if DB2 did not start sending statistics automatically.</td>
</tr>
<tr>
<td>Acctg</td>
<td>OMEGAMON II displays YES if DB2 started the accounting trace automatically at startup and sent the information to SMF or NO if DB2 did not start the trace.</td>
</tr>
<tr>
<td>Audit</td>
<td>OMEGAMON II displays YES if DB2 started the audit trace facility automatically at startup or NO if DB2 did not start the trace.</td>
</tr>
<tr>
<td>Monitor</td>
<td>OMEGAMON II displays YES if DB2 started the monitor trace facility automatically at startup or NO if DB2 did not start the trace.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Miscellaneous</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tbl Size</td>
<td>The size of the internal trace table in kilobytes.</td>
</tr>
<tr>
<td>Interval</td>
<td>The time interval (in minutes) at which DB2 sends statistics to SMF.</td>
</tr>
<tr>
<td>Buffer</td>
<td>The size (in bytes) of the monitor trace buffer. OMEGAMON II only displays this information if DB2 started the monitor trace facility automatically at startup.</td>
</tr>
<tr>
<td>Ur Ck Freq</td>
<td>UR Checkpoint frequency specifies the number of checkpoint cycles to complete before DB2 issues a warning message to the console and instrumentation for an uncommitted unit of recovery (UR).</td>
</tr>
</tbody>
</table>
DSNZP ARM Logging Parameters

The DSNZP ARM Logging Parameters screen displays information about the parameters that affect DB2 logging.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**DSNZP ARM Module**

The DSNZP ARM module name specified for DB2 startup and the date on which this module was assembled.

*Note: Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.*

**Initial Module**

The name of the initial DSNZP ARM load module.

*Note: This applies for DB2 7.1 and above.*

**Previous Module**

The name of the previous DSNZP ARM load module.

*Note: This applies for DB2 7.1 and above.*

**Logging Mode (TWOACTV)**

The logging mode: DUAL or SINGLE.

**Max Input Tape Units (MAXRTU)**

Maximum number of tape units that can be allocated to read archive log tape volumes concurrently.

**Max Input Open (MAXALLC)**

Specifies the maximum number of archive datasets that can be allocated for read processing.

**Output Buffer (OUTBUFF)**

The size of the log write buffer, in kilobytes.

**Write Threshold (WRTHRSH)**

The maximum number of log buffers DB2 fills before it starts a write.

**Deallocate Time (DEALLCT)**

Time before an unused archive tape volume is deallocated. The time specified is in the format (minutes,seconds). When the time is set to (1440,00), NOLIMIT appears.
DSNZPARM Logging Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chk Freq Minutes (LOGLOAD)</td>
<td>Specifies the number of minutes written between checkpoints.</td>
</tr>
<tr>
<td>Chk Freq Records (LOGLOAD)</td>
<td>The number of log records DB2 writes between checkpoints.</td>
</tr>
</tbody>
</table>
DSNZPARCHiving Parameters

The DSNZPARCHiving Parameters screen displays information about the parameters that affect DB2 archiving.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNZPARCH Module</td>
<td>The DSNZPARCH module name specified for DB2 startup.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.</td>
</tr>
<tr>
<td>Initial Module</td>
<td>The name of the initial DSNZPARCH load module.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>This applies for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Previous Module</td>
<td>The name of the previous DSNZPARCH load module.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>This applies for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Assembly Date</td>
<td>The date on which this module was assembled.</td>
</tr>
<tr>
<td>Mount WTOR</td>
<td>The mount request reply. OMEGAMON II displays YES if DB2 requests an MVS console operator reply before mounting an archive volume or NO if no reply is necessary.</td>
</tr>
<tr>
<td>Dual Archive Copies</td>
<td>The archive log mode: DUAL or SINGLE.</td>
</tr>
<tr>
<td>Catalog Volumes</td>
<td>The catalog request. OMEGAMON II displays YES if DB2 catalogs archive datasets or NO if it does not.</td>
</tr>
<tr>
<td>Volumes in BSDS</td>
<td>The number of archive volumes DB2 records in the BSDS.</td>
</tr>
<tr>
<td>RACF Protect</td>
<td>The RACF™ protection request. OMEGAMON II displays YES if DB2 RACF protects archive datasets or NO if DB2 does not protect the archive datasets.</td>
</tr>
<tr>
<td>Retention In Days</td>
<td>The number of days that DB2 keeps an archive volume.</td>
</tr>
<tr>
<td>Allocation Unit</td>
<td>The unit type that DB2 uses to allocate space for archive datasets.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Space Unit</strong></td>
<td>The allocation unit that DB2 uses to allocate space for archive datasets: BLK, CYL, or TRK.</td>
</tr>
<tr>
<td><strong>Space Primary</strong></td>
<td>The primary number of space units to allocate.</td>
</tr>
<tr>
<td><strong>Space Secondary</strong></td>
<td>The secondary number of space units to allocate.</td>
</tr>
<tr>
<td><strong>Blocksize</strong></td>
<td>The blocksize of the archive dataset.</td>
</tr>
<tr>
<td><strong>Compact Data</strong></td>
<td>Specifies whether or not data written to archive logs will be compacted.</td>
</tr>
<tr>
<td><strong>Max Quiesce Time</strong></td>
<td>The maximum number of seconds DB2 will wait for a systemwide quiesce point for the ARCHIVE LOG MODE (QUIESCE) command.</td>
</tr>
<tr>
<td><strong>Timestamp in Name</strong></td>
<td>Specifies whether the timestamp is to be placed in the archive log dataset name.</td>
</tr>
<tr>
<td><strong>MassStor Group (MSVGP)</strong></td>
<td>The mass storage volume group to use for copy 1 of the archive dataset.</td>
</tr>
<tr>
<td><strong>MassStor Group (MSVGP2)</strong></td>
<td>The mass storage volume group to use for copy 2 of the archive dataset.</td>
</tr>
<tr>
<td><strong>Archive Prefix (ARCPFX1)</strong></td>
<td>The dataset prefix for copy 1 of the archive dataset. This prefix is appended to the high-level qualifier.</td>
</tr>
<tr>
<td><strong>Archive Prefix (ARCPFX2)</strong></td>
<td>The dataset prefix for copy 2 of the archive dataset. This prefix is appended to the high-level qualifier.</td>
</tr>
</tbody>
</table>
DSNZPARM Authorization, RLF and DDF Parameters

The DSNZPARM Access and Security Parameters screen displays information about the parameters that affect DB2 access and security.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DSNZPARM Module</strong></td>
<td>The DSNZPARM module name specified for DB2 startup and the date on which it was assembled.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.</td>
</tr>
<tr>
<td><strong>Initial Module</strong></td>
<td>The name of the initial DSNZPARM load module.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>This applies for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td><strong>Previous Module</strong></td>
<td>The name of the previous DSNZPARM load module.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>This applies for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td><strong>Authorization</strong></td>
<td></td>
</tr>
<tr>
<td>Auth Checking (AUTH)</td>
<td>The authorization checking mode. OMEGAMON II displays YES if DB2 is doing authorization checking or NO if it is not.</td>
</tr>
<tr>
<td>Default ID (DEFLTID)</td>
<td>The default authorization ID for batch jobs if external security is not active and USER= was not specified on the jobcard.</td>
</tr>
<tr>
<td>System Admin (SYSADM)</td>
<td>The authorization ID in use with the install system administration capability.</td>
</tr>
<tr>
<td>System Admin 2 (SYSADM2)</td>
<td>The secondary authorization ID in use with the install system administration capability.</td>
</tr>
<tr>
<td>System Oper (SYSOPR1)</td>
<td>The authorization ID in use with the install system operator authority.</td>
</tr>
<tr>
<td>System Oper 2 (SYSOPR2)</td>
<td>The secondary authorization ID in use with the install system operator authority.</td>
</tr>
<tr>
<td>Pkg Owner Auth (HOPAUTH)</td>
<td>For a non-DB2 Requester executing a package at a DB2 server and using a three-part name to hop to a third site:</td>
</tr>
</tbody>
</table>
DSNZPARM Authorization, RLF and DDF Parameters

Resource Managers and Other DB2 Subsystem Information 239

YES Specifies that the package owner is the authority used.
NO Specifies that the ID that executes the package is the authority used.

Plan Auth Cache (AUTHCACH) The size of the authorization cache that is used, if CACHESIZE is not specified on the bind plan subcommand. If this field is zero, no authorization cache is used. This field appears only for DB2 Version 4 and above.

Bind New Pkg (BINDNV) The authority level required when adding a new package, or new version of an existing package, to a collection. This field is displayed only for DB2 Version 4 and above.

Governor (Resource Limit Facility)

Auto Start (RLF) The RLF start mode. OMEGAMON II displays YES if DB2 automatically starts the governor (RLF) or NO if it does not.

Authorization ID (RLFAUTH) The authorization ID of the DB2 governor RLF.

Table Suffix (RLFTBL) The suffix of the resource limit specification table (RLST).

Action If No Table (RLFERR) The default action for governor if there is no matching entry in the RLST table. The value is:

- NOLIMIT Run without limit.
- NORUN Do not run at all.
- integer A limit of $n$ CPU service units.

Distributed Database Facility

DDF Start Option The DDF startup option.

- NO DDF is not to be included in this DB2 subsystem.
- COMMAND DDF is to be included during DB2 initialization but not started; must be started via the DB2 command.
- AUTO DDF is to be included and started during DB2 initialization.

DDF Action If Error (RLFERRD) The RLF option selected for DB2 distributed database access threads if no matching entry is located in the RLF table.

- NOLIMIT Run without limit.
- NORUN Do not run at all.
- integer A limit of $n$ CPU service units.

DDF Commit Status (CMTSTAT) Status of a DDF thread after it commits or rolls back and holds no database locks or cursors active or inactive.

Resync Interval (RESYNC) Time interval in minutes during which indoubt logical units of work involving this DB2 subsystem and partner logical units are processed.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idle Timeout (IDTHTOIN)</td>
<td>The time in seconds that an active server thread is allowed to remain dormant before it is cancelled. A value of zero disables timeout for server threads, but not for inactive or indoubt threads. This field is displayed only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>TCP/IP Verified (TCPALVER)</td>
<td>TCP/IP is already verified. Specifies whether the TCP/IP connection requests containing only a user ID (no password, RACF PassTicket, or DCE ticket) are accepted by DB2.</td>
</tr>
<tr>
<td>Max Type1 Inactive Thds (MAXTYPE1)</td>
<td>Specifies the number of type 1 inactive threads allowed by DB2. 0 indicates that type 1 inactive connections are not allowed. The default is 0. Valid values are 0 - MAX REMOTE CONNECTED.</td>
</tr>
<tr>
<td>Tcpip Keepalive Override</td>
<td>Determines whether to override the TCP/IP stack KeepAlive value.</td>
</tr>
<tr>
<td></td>
<td><strong>ENABLE</strong> Do not override the TCP/IP value. This is the default.</td>
</tr>
<tr>
<td></td>
<td><strong>DISABLE</strong> Disable Keep Alive probing. 1-65534 (seconds) indicates that the TCP/IP stack Keep Alive value should be modified in favor of this new value.</td>
</tr>
<tr>
<td>Pool Thread Timeout (POOLINAC)</td>
<td>Specifies the time, in seconds, that a DBAT can remain idle in the pool before it is terminated. 0 causes a DBAT to terminate rather than go into the pool if there are a sufficient number of threads in the pool to process the number of type 2 inactive threads that currently exist. Valid values are 0-9999. The default is 120.</td>
</tr>
</tbody>
</table>
DSNZPARM IRLM Parameters

The DSNZPARM IRLM Parameters screen displays information about the IRLM with which DB2 communicates.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options on the top of the screen.

- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNZPARM Module</td>
<td>The DSNZPARM module name specified for DB2 startup and the date on which this module was assembled.</td>
</tr>
<tr>
<td>Note:</td>
<td><strong>Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.</strong></td>
</tr>
<tr>
<td>Initial Module</td>
<td>The name of the initial DSNZPARM load module.</td>
</tr>
<tr>
<td>Note:</td>
<td><strong>This applies for DB2 Version 7.1 and above.</strong></td>
</tr>
<tr>
<td>Previous Module</td>
<td>The name of the previous DSNZPARM load module.</td>
</tr>
<tr>
<td>Note:</td>
<td><strong>This applies for DB2 Version 7.1 and above.</strong></td>
</tr>
<tr>
<td>Max/Tablespace (NUMLKTS)</td>
<td>The maximum number of concurrent data page locks allowed per tablespace.</td>
</tr>
<tr>
<td>IRLM Proc (IRLMPRC)</td>
<td>The procedure name that DB2 uses to start IRLM automatically.</td>
</tr>
<tr>
<td>Max/User (NUMLKUS)</td>
<td>The maximum number of concurrent data page locks allowed per user.</td>
</tr>
<tr>
<td>IRLM Subsys (IRLMSID)</td>
<td>The IRLM subsystem name.</td>
</tr>
<tr>
<td>Timeout Interval (IRLMRWT)</td>
<td>The IRLM resource timeout interval in seconds.</td>
</tr>
<tr>
<td>Auto Start Wait (IRLMSWT)</td>
<td>The number of seconds that DB2 waits for IRLM to start before abending.</td>
</tr>
<tr>
<td>Auto Start IRLM (IRLMAUT)</td>
<td>The IRLM start mode. OMEGAMON II displays YES if DB2 starts IRLM automatically or NO if it does not.</td>
</tr>
</tbody>
</table>
Utility Timeout (UTIMOUT)  
Number of IRLM resource timeout intervals that a utility waits for a lock or claims to be released.

U Lock for RR (RRULOCK)  
Specifies whether repeatable read (RR) cursors will use page update (U) locks instead of shared (S) locks to access a table, and drop back to S locks as the cursor moves to the next page.
DSNZPARM Storage Parameters

The DSNZPARM Storage Parameters screen displays virtual storage allocations for the DB2 buffer pools and the EDM pool.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **DSNZPARM Module**
  The name of the DSNZPARM module specified for DB2 startup and the date on which this module was assembled.

  **Note:** Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.

- **Initial Module**
  The name of the initial DSNZPARM load module.

  **Note:** This applies for DB2 Version 7.1 and above.

- **Previous Module**
  The name of the previous DSNZPARM load module.

  **Note:** This applies for DB2 Version 7.1 and above.

- **EDM Pool**
  The size of the Environmental Descriptor Manager (EDM) pool in kilobytes.

- **Sort Pool (SORTPOOL)**
  The size in kilobytes of the sort pool.

- **RID Pool (MAXRBLK)**
  The maximum size in kilobytes of the RID pool. If this value is zero, access path selections that require the RID pool (including list prefetch and hybrid joins) will not be used.

- **Minimum RID Lists (MINRBLK)**
  The least number of RID lists allowed for a RID map.

- **VARCHAR From Index (RETVLCFK)**
  Specifies whether DB2 can return data from an index key for a varying length column.

- **Evaluate Uncommitted (EVALUNC)**
  Specifies whether DB2 uses uncommitted data to do stage 1 predicate evaluation.

- **Use X Lock on Update (XLKUPDLT)**
  Specifies whether DB2 is to use X lock for a searched update or a delete.
**DSNZPARM Storage Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDM Best Fit</td>
<td>Specifies whether DB2 is to use EDM better fit free chain search algorithm.</td>
</tr>
<tr>
<td>(EDMBFIT)</td>
<td></td>
</tr>
<tr>
<td>Update Part Index</td>
<td>Specifies whether DB2 is to allow values in partitioning key columns to be</td>
</tr>
<tr>
<td>(PARTKEYU)</td>
<td>updated.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Outer Join Perf</td>
<td>Specifies whether DB2 is to enable outer join performance enhancements.</td>
</tr>
<tr>
<td>(OJPERFEH)</td>
<td></td>
</tr>
<tr>
<td>Retained Lock Mult (RETLWAIT)</td>
<td>Multiplier for determining how long a transaction waits for incompatible</td>
</tr>
<tr>
<td></td>
<td>retained locks. This value is multiplied by the normal timeout multiplier</td>
</tr>
<tr>
<td></td>
<td>for the connection.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Rtn Auth Cache (CACHERAC)</td>
<td>Specifies the amount of storage allocated to the caching of authorization</td>
</tr>
<tr>
<td></td>
<td>information for all routines on this DB2 subsystem.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Number LE Tokens (LEMAX)</td>
<td>The maximum number of language environment tokens that are active at any time.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Star Join Ratio</td>
<td>-1  Star join is disabled</td>
</tr>
<tr>
<td>(STARJOIN)</td>
<td>1   Star join is enabled. The one table with the largest cardinality is the</td>
</tr>
<tr>
<td></td>
<td>fact table. However, if there is more than one table with cardinality, Star</td>
</tr>
<tr>
<td></td>
<td>Join is not enabled.</td>
</tr>
<tr>
<td></td>
<td>0   Star join is enabled if the cardinality of the fact table is at least</td>
</tr>
<tr>
<td></td>
<td>25 times the cardinality of the largest dimension that is a base table that</td>
</tr>
<tr>
<td></td>
<td>is joined to the fact table.</td>
</tr>
<tr>
<td></td>
<td>n   Star join is enabled if the cardinality of the fact table is at least n</td>
</tr>
<tr>
<td></td>
<td>times the cardinality of the largest dimension, that is, a base table that is</td>
</tr>
<tr>
<td></td>
<td>joined to the fact table.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Star Join Memory</td>
<td>Specifies the maximum size of the memory pool for STARJOIN.</td>
</tr>
<tr>
<td>(QWP4SJXP)</td>
<td></td>
</tr>
<tr>
<td>Rollup Aggregation Fields</td>
<td>Rollup accounting aggregation fields.</td>
</tr>
</tbody>
</table>
DSNZPARM Dataset and Database Parameters

The DSNZPARM Dataset and Database Parameters screen displays information about the dataset and database-related installation parameters in the DSNZPARM module.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

### DSNZPARM Module

The name of the DSNZPARM module specified for DB2 startup and the date on which it was assembled.

*Note:* Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.

### Initial Module

The name of the initial DSNZPARM load module.

*Note:* This applies for DB2 Version 7.1 and above.

### Previous Module

The name of the previous DSNZPARM load module.

*Note:* This applies for DB2 Version 7.1 and above.

### Dataset Related

- **Maximum Datasets**
  
  Determines how much initial memory to allocate for the datasets at startup time (defined by DSNZPARM DSMAX).

- **Hi-lvl Qualifier**
  
  The high-level qualifier that DB2 uses to create VSAM datasets.

- **HSM Auto Recall**
  
  The HSM recall mode. OMEGAMON II displays YES if DB2 waits for DF/HSM to recall datasets or NO if DB2 does not wait.

- **Auto Recall Wait**
  
  The length of time (in seconds) that DB2 will wait for DF/HSM to recall a dataset, if DF/HSM Auto Recall mode is YES.

- **Def Index Type (DEFIXTP)**
  
  The default index type used if the TYPE option is omitted from a CREATE INDEX statement. (This field appears only for DB2 Version 4 and above.)

- **Checkpoints to Pseudo-Close**
  
  Number of consecutive checkpoints that a dataset or partition must go through since it was last updated before being selected for pseudo-close, that is, its state changes from read-write to read-only.
On start, **RESTART The Following Databases and Tablespaces:**

Below this heading of RESTART or DEFERRED, OMEGAMON II lists the databases and tablespaces to be automatically restarted or deferred when DB2 starts. If DB2 has terminated, only the first 24 databases and tablespaces are displayed.

<table>
<thead>
<tr>
<th>Parameter Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elapsed Time to Pseudo-close (PCLOSET)</td>
<td>Amount of time in minutes that must elapse since a dataset or partition was last updated before it can be selected for pseudo-close.</td>
</tr>
<tr>
<td>Checkpoints to Level Id Update (DLDRFREQ)</td>
<td>Number of consecutive checkpoints between updates to the Level Id of a pageset or partition. Setting this parameter to zero disables down-level detection. (This field appears only for DB2 Version 4 and above.)</td>
</tr>
</tbody>
</table>
DSNZPARM Data Definition Control Support Parameters

The DSNZPARM Data Definition Control Support Parameters screen displays information about the Data Definition Control Support (DDCS) installation parameters in the DSNZPARM module.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **DSNZPARM Module**: The name of the current DSNZPARM module specified for DB2 startup and the date on which this module was assembled.
  
  **Note**: Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.

- **Initial Module**: The name of the initial DSNZPARM load module.
  
  **Note**: This applies for DB2 Version 7.1 and above.

- **Previous Module**: The name of the previous DSNZPARM load module.
  
  **Note**: This applies for DB2 Version 7.1 and above.

- **Activate DD Control**: Specifies whether or not to install data definition control support.

- **Control All Appl**: Specifies whether or not the DB2 subsystem is completely controlled by a set of closed applications whose application identifiers are identified in the application registration table.

- **Require Full Names**: Specifies whether or not registered objects require fully qualified names.

- **Unregistered Default**: Specifies the type of action taken for DDL that names an unregistered object.

- **Registration Owner**: Displays the owner of the application registration table and the object registration table.

- **Registration Database**: Specifies the name of the database that contains the registration tables.

- **Appl Registration Table**: Specifies the name of the application registration table.
<table>
<thead>
<tr>
<th><strong>Object Registration Table</strong></th>
<th>Specifies the name of the object registration table.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ART/ORT Escape Character</strong></td>
<td>DDCS escape character for a search of the application registration table (ART) or the object registration table (ORT). This character is shown in both display and hexadecimal formats.</td>
</tr>
</tbody>
</table>
DSNZPARM Data Sharing Parameters

The DSNZPARN Data Sharing Parameters screen displays information about the data sharing installation parameters in the DSNZPARN module. This screen appears only for DB2 Version 4 and above.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **DSNZPARN Module**
  - The DSNZPARN module name specified for DB2 startup,
  - Note: Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM command.

- **Initial Module**
  - The name of the initial DSNZPARN load module.
  - Note: This applies for DB2 Version 7.1 and above.

- **Previous Module**
  - The name of the previous DSNZPARN load module.
  - Note: This applies for DB2 Version 7.1 and above.

- **Assembly Date**
  - The date on which this module was assembled.

- **Data Sharing (DSHARE)**
  - Specifies whether or not DB2 data sharing is enabled.

- **Group Name (GRPNAME)**
  - The name of the DB2 data sharing group. This field displays N/A if data sharing is not enabled.

- **Member name (MEMBNAME)**
  - The name of the DB2 data sharing member. This field displays N/A if data sharing is not enabled.

- **Parallel Assist**
  - If YES, this member can assist in parallel processing.

- **Parallel Coord**
  - If YES, this member can coordinate parallel processing.
DSNZPARM Stored Procedures Parameters

The DSNZPARM Stored Procedures Parameters screen displays information about the installation parameters in the DSNZPARM module for stored procedures invoked by SQL CALL statements. This screen appears only for DB2 Version 4 and above.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNZPARM Module</td>
<td>The DSNZPARM module name specified for DB2 startup. <strong>Note:</strong> Starting with DB2 Version 7.1, the DSNZ command displays three lines to reflect the usage of the DB2 SET SYSPARM.</td>
</tr>
<tr>
<td>Initial Module</td>
<td>The name of the initial DSNZPARM load module. <strong>Note:</strong> This applies for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Previous Module</td>
<td>The name of the previous DSNZPARM load module. <strong>Note:</strong> This applies for DB2 Version 7.1 and above.</td>
</tr>
<tr>
<td>Assembly Date</td>
<td>The date on which this module was assembled.</td>
</tr>
<tr>
<td>MVS Procname (STORPROC)</td>
<td>The name of the MVS JCL procedure used to start the DB2 stored procedures address space.</td>
</tr>
<tr>
<td>Max Abends (STORMXAB)</td>
<td>The number of times a stored procedure can terminate abnormally before DB2 stops it, and rejects any further requests. Use the DB2 command START PROCEDURE to remove the stopped status.</td>
</tr>
<tr>
<td>Timeout Value (STORTIME)</td>
<td>The number of seconds to wait for an SQL CALL statement to be assigned for execution in the DB2 stored procedures address space. A value of zero disables the timeout for SQL CALL statements.</td>
</tr>
</tbody>
</table>
Lock Manager/Claim/Drain Information

The Lock Manager/Claim/Drain Information screen displays information about current locking activity and claims and drains.

From this screen you can access the Global Lock Statistics display by entering B on the top line and the corresponding near-term history display by entering H on the top line.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- global lock information, choose the B option at the top of the screen
- near-term historical activity, choose the H option at the top of the screen
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

Collection Interval

This field will always display REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.

Start

The start time of the report interval currently displayed.

Report Interval

The amount of time in the last cycle (for example, between two presses of the Enter key).

End

The end time of the report interval currently displayed.

For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

Also note that the column headings for the three rate columns include a count in parentheses.

- The number under /SECONDS is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

## Lock Manager Information

- **Deadlocks Detected**
  - The number of deadlocks detected.

- **Timeouts Detected**
  - Occasions when suspension of a unit of work lasted longer than the IRLM timeout value.

- **Susp Detected - Lock Only**
  - Suspensions of a unit of work because a lock could not be obtained.

- **Susp Detected - Latch Only**
  - DB2 internal latch suspensions.

- **Susp Detected - Other**
  - Suspensions caused by something other than locks and latches.

- **Lock Escalations - to Shared**
  - Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IS) lock to escalate to a shared (S) lock.

- **Lock Escalations - to Exclusive**
  - Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IX) lock to escalate to an exclusive (X) lock.

- **Lock Requests**
  - Requests to IRLM to obtain a lock on a resource.

- **Unlock Requests**
  - Requests to IRLM to unlock a resource.

- **Query Requests**
  - Requests to IRLM to query a lock.

- **Change Requests**
  - Requests to IRLM to change a lock.

- **Other IRLM Requests**
  - Requests to IRLM to perform a function other than those listed above.

## Claim/Drain Information

- **Claim Requests**
  - Number of claim requests.

- **Unsuccessful Claim Requests**
  - Number of unsuccessful claim requests.

- **Drain Requests**
  - Number of drain requests.

- **Unsuccessful drain requests**
  - Number of unsuccessful drain requests.
Global Lock Statistics

This Global Lock Statistics screen displays information about current global locking activity in a data sharing environment. This screen is available only for DB2 Version 4 and above.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- lock information, choose the A option at the top of the top of the screen
- near-term historical activity, choose the H option at the top of the screen
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field will always display <strong>REALTIME</strong> to indicate that you are looking at the realtime version of this screen and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Total Global Contention</td>
<td>The percent of synchronous XES lock, change, or unlock requests that resulted in global contention.</td>
</tr>
<tr>
<td>False Contention Percentage</td>
<td>The rate of false contentions to real contentions. This number should be no more than 50%.</td>
</tr>
<tr>
<td>P-Lock/Notify Engines</td>
<td>The number of engines available for P-lock exit or notify exit requests.</td>
</tr>
</tbody>
</table>

For each field described below, five statistics are provided:
- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.
Global Lock Statistics

Also note that the column headings for the three rate columns include a count in parentheses.

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

Global Lock Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-lock Lock Requests</td>
<td>Number of lock requests for P-locks.</td>
</tr>
<tr>
<td>P-lock Unlock Requests</td>
<td>Number of unlock requests for P-locks.</td>
</tr>
<tr>
<td>P-lock Change Requests</td>
<td>Number of change requests for P-locks.</td>
</tr>
<tr>
<td>XES Lock Requests</td>
<td>The number of lock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests. Only the most restrictive lock for a particular resource is propagated to XES and the coupling facility.</td>
</tr>
<tr>
<td>XES Unlock Requests</td>
<td>The number of unlock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td>XES Change Requests</td>
<td>The number of change requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td>XES Asynchronous Requests</td>
<td>The number of L-locks and P-locks propagated to XES asynchronously. This occurs when a new inter-DB2 interest occurs on a parent resource or when a request completes after the requestor's execution unit has been suspended.</td>
</tr>
<tr>
<td>Suspends-IRLM Global Contention</td>
<td>The number of suspends due to IRLM global resource contentions. IRLM lock states were in conflict and inter-system communication is required to resolve the conflict.</td>
</tr>
<tr>
<td>Suspends-XES Global Contention</td>
<td>The number of suspends due to MVS XES global resource contentions that were not IRLM-level contentions. The XES lock states were in conflict, but the IRLM lock states were not.</td>
</tr>
<tr>
<td>Suspends-False Contention</td>
<td>The number of suspends caused by MVS XES false contentions. XES detects hash class contention when two different locks on different resources hash to the same entry in the coupling facility lock table. The requester is suspended until it is determined that there is no real lock contention.</td>
</tr>
<tr>
<td>Negotiate Pageset P-Locks</td>
<td>The number of times this DB2 member was driven to negotiate a pageset/partition P-lock because of changing inter-DB2 interest levels on the pageset/partition.</td>
</tr>
<tr>
<td>Negotiate Page P-Locks</td>
<td>The number of times this DB2 member was driven to negotiate a page P-lock because of inter-DB2 P-lock contention.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Negotiate Other P-Locks</td>
<td>The number of times this DB2 member was driven to negotiate a P-lock type other than pageset/partition or page.</td>
</tr>
<tr>
<td>Negotiate P-Lock Change</td>
<td>The number of times a P-lock change request was issued during P-lock negotiation.</td>
</tr>
<tr>
<td>Incompatible Retained Locks</td>
<td>The number of global lock or change requests that failed because of an incompatible retained lock. Certain P-locks can be retained because of a system failure. Another DB2 member cannot access the data that the retained P-lock is protecting unless it requests a P-lock in a compatible state.</td>
</tr>
<tr>
<td>Notify Messages Sent</td>
<td>The number of notify messages sent.</td>
</tr>
<tr>
<td>Notify Messages Received</td>
<td>The number of notify messages received.</td>
</tr>
<tr>
<td>Engine Not Available</td>
<td>The number of times an engine was not available for a P-lock exit or a notify exit request.</td>
</tr>
</tbody>
</table>
SQL/RID Pool/Parallelism/Stored Procedure Information

Introduction
The SQL/RID Pool/Parallelism/Stored Procedure Information screen displays information about current SQL activity.

From this screen you can access the corresponding near-term history display by entering H on the top line.

Highlighting
OMEGAMON II does not highlight any fields on this screen.

Navigation
For additional information about
- near-term historical activity, choose the H option at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields
Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field always displays REALTIME to indicate that you are looking at the</td>
</tr>
<tr>
<td></td>
<td>realtime version of this screen, and not at the corresponding near-term</td>
</tr>
<tr>
<td></td>
<td>history screen. On this screen, the collection interval and the report</td>
</tr>
<tr>
<td></td>
<td>interval are the same.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of</td>
</tr>
<tr>
<td></td>
<td>the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Maximum Degree of</td>
<td>The maximum degree of parallel I/O processing for all parallel groups.</td>
</tr>
<tr>
<td>Parallelism Executed</td>
<td>This is a high-water mark.</td>
</tr>
</tbody>
</table>

For each field described below, six statistics are provided:
- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.
- Percentage of DML, DCL, or DDL during the last cycle.

Also note that the column headings for the three rate columns include a count in parentheses:
- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

**SQL Manipulative (DML)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>Select statements executed to retrieve rows from a DB2 table.</td>
</tr>
<tr>
<td>INSERT</td>
<td>Insert statements executed to add rows to a DB2 table.</td>
</tr>
<tr>
<td>UPDATE</td>
<td>Update statements executed to alter existing rows in a DB2 table.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Delete statements executed to remove rows from a DB2 table.</td>
</tr>
<tr>
<td>OPEN CURSOR</td>
<td>Open statements executed to prepare cursors for subsequent Fetch operations.</td>
</tr>
<tr>
<td>CLOSE CURSOR</td>
<td>Close statements executed to close previously opened cursors.</td>
</tr>
<tr>
<td>FETCH</td>
<td>Fetch statements executed to retrieve rows from DB2 tables.</td>
</tr>
<tr>
<td>PREPARE</td>
<td>Occasions when SQL statements were dynamically prepared for execution.</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>Describe statements executed to obtain information about prepared SQL statements.</td>
</tr>
<tr>
<td>DESCRIBE TABLE</td>
<td>Number of describe table statements executed to obtain information about a table or view.</td>
</tr>
</tbody>
</table>

**Total DML**

All data manipulative language statements.

**SQL Control (DCL)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL</td>
<td>Call statements executed to invoke a stored procedure. This field appears only for DB2 version 4 and above.</td>
</tr>
<tr>
<td>COMMENT ON</td>
<td>Comment On statements issued to add or replace comments for user-defined objects (tables, views, columns, and sets of columns) in the DB2 catalog.</td>
</tr>
<tr>
<td>CONNECT (Type 1)</td>
<td>Connect (Type 1) statements executed to connect an application process to a designated server.</td>
</tr>
<tr>
<td>CONNECT (Type 2)</td>
<td>Connect (Type 2) statements executed to connect an application process to a designated server.</td>
</tr>
<tr>
<td>GRANT</td>
<td>Grant statements issued to extend DB2 privileges to users.</td>
</tr>
<tr>
<td>INCREMENTAL BIND</td>
<td>Occurrences of Incremental Bind, which take place upon execution of a DB2 plan that is bound as VALIDATE(RUN).</td>
</tr>
<tr>
<td>Label</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LABEL ON</td>
<td>Label On statements issued to add or replace labels in DB2 catalog descriptions of tables, views, columns, and sets of columns.</td>
</tr>
<tr>
<td>LOCK TABLE</td>
<td>Lock Table statements issued to lock a tablespace or table in a segmented tablespace.</td>
</tr>
<tr>
<td>RELEASE</td>
<td>Release statements executed to place one or more connections in the released state.</td>
</tr>
<tr>
<td>REVOKE</td>
<td>Revoke statements issued to revoke users' DB2 privileges.</td>
</tr>
<tr>
<td>SET CONNECTION</td>
<td>Set connection statements executed to establish the application server of the process.</td>
</tr>
<tr>
<td>SET CURRENT DEGREE</td>
<td>Set current degree statements executed to assign a value to the CURRENT DEGREE special register.</td>
</tr>
<tr>
<td>SET CURRENT RULES</td>
<td>Set current rules statements executed to assign a value to the CURRENT RULES special register. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>SET CURRENT SQLID</td>
<td>Set Current SQLID statements issued to change your current authorization ID.</td>
</tr>
<tr>
<td>SET Host Variable</td>
<td>Set host-variable statements issued.</td>
</tr>
<tr>
<td>Total DCL</td>
<td>All data control language statements.</td>
</tr>
</tbody>
</table>

**SQL Definitional (DDL)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATE TABLE</td>
<td>Create Table statements issued to define a DB2 table.</td>
</tr>
<tr>
<td>CREATE INDEX</td>
<td>Create Index statements issued to establish indexes on DB2 tables.</td>
</tr>
<tr>
<td>CREATE TABLESPACE</td>
<td>Create Tablespace statements issued to establish DB2 tablespaces.</td>
</tr>
<tr>
<td>CREATE DATABASE</td>
<td>Create Database statements issued to establish DB2 databases.</td>
</tr>
<tr>
<td>CREATE STOGROUP</td>
<td>Create Storage Group statements issued to establish DB2 storage groups.</td>
</tr>
<tr>
<td>CREATE SYNONYM</td>
<td>Create Synonym statements issued to create alternate names for DB2 tables and views.</td>
</tr>
<tr>
<td>CREATE VIEW</td>
<td>Create View statements issued to establish views of DB2 tables.</td>
</tr>
<tr>
<td>CREATE ALIAS</td>
<td>Create Alias statements issued to achieve “location transparency” of DB2 tables. This field is used primarily to refer to tables and views from remote DB2 subsystems in a distributed environment.</td>
</tr>
<tr>
<td>DROP TABLE</td>
<td>Drop Table statements issued to remove tables from DB2 databases.</td>
</tr>
<tr>
<td>DROP INDEX</td>
<td>Drop Index statements issued to remove indexes from DB2 tables.</td>
</tr>
<tr>
<td>DROP TABLESPACE</td>
<td>Drop Tablespace statements issued to delete tablespaces.</td>
</tr>
</tbody>
</table>
DROP DATABASE  Drop Database statements issued to delete databases.
DROP STOGROUP  Drop Storage Group statements issued to delete storage group definitions.
DROP SYNONYM  Drop Synonym statements issued to delete alternative table names and view names.
DROP VIEW     Drop View statements issued to delete table views.
DROP ALIAS    Drop Alias statements issued to delete view and table aliases from the DB2 catalog.

DROP PACKAGE The number of drop package statements issued.
ALTER TABLE   Alter Table statements issued to change table attributes.
ALTER INDEX   Alter Index statements issued to change index attributes.
ALTER TABLESPACE Alter Tablespace statements issued to change tablespace attributes.
ALTER STOGROUP Alter Storage Group statements issued to add devices to and delete devices from storage groups.
ALTER DATABASE Alter database statements issued to change DB2 databases.

Total DDL    All data definitional language statements.

RID Pool Accesses
For each field described below, four statistics are provided:

- Interval quantity, which reflects the amount of activity that occurred during the interval.
- Rate per second.
- Rate per thread.
- Rate per commit.

Successful  The number of times RID list processing was used when accessing a DB2 table.
Not Used (No Storage)  The number of times RID list processing was terminated because of insufficient storage to hold the list of RIDs.
Not Used (Max Limit)  The number of times RID list processing was terminated because the number of RIDs would exceed a RID limit or threshold.

I/O Parallelism
For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity since DB2 was started.
- Interval Quantity, which reflects activity during the last cycle.
- Rate per minute during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

**Groups**
- **Executed**
  - Number of parallel groups that were executed.

**Planned Degree**
- **Executed**
  - Number of parallel groups that were executed at the planned parallel degree.

**Reduced Degree**
- **Executed**
  - Number of parallel groups that were processed to a degree less than the planned degree because of a storage shortage or buffer pool contention.

**Seq (Cursor)**
- Number of parallel groups that fallback to sequential mode because of a cursor that allows update or delete.

**Seq (No Buffer)**
- Number of parallel groups that fallback to sequential mode because of a storage shortage or buffer pool contention.

**Seq (No ESA Sort)**
- Number of parallel groups that fallback to sequential mode because of no ESA sort support.

**Seq (No ESA Enclave)**
- Number of parallel groups that were executed in sequential mode because MVS/ESA enclave services were unavailable.

---

**Note:** These fields appear only for DB2 Version 4 or above.

**Call Statements**
- Call statements executed to invoke a stored procedure.

**Abended**
- Call statements executed to invoke a stored procedure that terminated abnormally.

**Timed-Out**
- Call statements executed to invoke a stored procedure that timed out while waiting to be scheduled.

**Rejected**
- Call statements executed to invoke a stored procedure that was in the STOP ACTION(REJECT) state.
Open/Close Statistics

Introduction

The Open/Close Statistics screen displays information about open and close dataset activity and information about deferred close activity.

From this screen you can access the corresponding near-term history display by entering H on the top line.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options from the menu.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field will always display REALTIME to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the report interval currently displayed.</td>
</tr>
<tr>
<td>Maximum Number of Open Datasets (DSMAX)</td>
<td>The value specified for the installation parameter DSMAX. DB2 uses this value to determine when the drain process should be initiated to close unused datasets.</td>
</tr>
<tr>
<td>Checkpoints to Pseudo-Close (PCLOSEN)</td>
<td>Number of consecutive checkpoints that a dataset or partition must go through since it was last updated before being selected for pseudo-close, that is, the state changed from read-write to read-only.</td>
</tr>
<tr>
<td>Elapsed Time to Pseudo-Close (PCLOSET)</td>
<td>Amount of time in minutes that must elapse since a dataset or partition was last updated before it can be selected for pseudo-close.</td>
</tr>
<tr>
<td>Current Number Open Datasets</td>
<td>The current number of open datasets.</td>
</tr>
</tbody>
</table>
Open/Close Statistics

- **High Water Open Datasets**: The maximum number of datasets open at any one time since DB2 was started.
- **High Water Mark Not-in-use Datasets**: The maximum number of pagesets specified with CLOSE(YES) that are not in use but are not physically closed.
- **Current Number Not-in-use Datasets**: The current number of open pagesets specified with CLOSE(YES) that are not in use but are not physically closed.

For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity that has occurred since DB2 was started.
- Interval quantity, which reflects the amount of activity that occurred during the last cycle.
- Rate per second during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

Also note that the column headings for the three rate columns include a count in parentheses.

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

- **Not-in-use Datasets Requested**: Number of requests to open a dataset that was on the deferred close queue. When this occurs, a physical dataset open is not necessary.
- **Not-in-use Datasets Closed**: Number of not-in-use datasets that were closed because the total number of open datasets reached the deferred close threshold. The deferred close threshold value is based on the smaller of the value of DSMAX or the MVS DD limit.
- **Datasets Converted to Read-Only**: Number of infrequently updated datasets converted from read-write to read-only (pseudo-close). The SYSLGRNG entry is closed at this time.
DB2 Command Statistics

Introduction

The DB2 Command Statistics screen displays information about current DB2 command activity.

From this screen you can access the corresponding near-term history display by entering H on the top line.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

To access additional information about
- the corresponding near-term history display, select the H option at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. For each field described below four statistics are provided:

- **Total Quantity** - activity since DB2 was started.
- **Interval Quantity** - activity during the last cycle.
- **Rate per second during the last cycle.**
- **Percentage of total commands since DB2 was started.**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALTER BUFFERPOOL</strong></td>
<td>Alter Bufferpool commands executed to alter attributes for active or inactive buffer pools.</td>
</tr>
<tr>
<td><strong>ALTER GROUP BUFFERPOOL</strong></td>
<td>Alter GroupBufferpool commands executed to alter attributes of group buffer pools. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td><strong>ARCHIVE LOG</strong></td>
<td>Archive Log commands executed to initiate a DB2 active log switch.</td>
</tr>
<tr>
<td><strong>CANCEL DDF THREAD</strong></td>
<td>Cancel DDF Thread commands executed to cancel a thread. DB2 Version 3 allows only DDF threads to be cancelled. DB2 Version 4 allows any DB2 thread to be cancelled.</td>
</tr>
<tr>
<td><strong>DISPLAY ARCHIVE</strong></td>
<td>Display Archive commands executed to display input archive log information.</td>
</tr>
<tr>
<td><strong>DISPLAY BUFFERPOOL</strong></td>
<td>Display Bufferpool commands executed to display statistics for active or inactive buffer pools.</td>
</tr>
<tr>
<td><strong>DISPLAY DATABASE</strong></td>
<td>Display Database commands executed to display status information about tablespaces and indexspaces within a database.</td>
</tr>
<tr>
<td>Command</td>
<td>Description and Details</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DISPLAY GROUP</td>
<td>Display Group commands executed to display statistics about the data sharing group to which the DB2 subsystem belongs. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DISPLAY GROUP BUFFERPOOL</td>
<td>Display GroupBufferpool commands executed to display attributes of group buffer pools. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DISPLAY LOCATION</td>
<td>Display Location commands executed to display statistics about threads with distributed relationships.</td>
</tr>
<tr>
<td>DISPLAY PROCEDURE</td>
<td>Display Procedure commands executed to display statistics about stored procedures. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DISPLAY RLIMIT</td>
<td>Display Rlimit commands executed to display the current status of the resource limit facility.</td>
</tr>
<tr>
<td>DISPLAY THREAD</td>
<td>Display Thread commands executed to display status information about DB2 threads.</td>
</tr>
<tr>
<td>DISPLAY TRACE</td>
<td>Display Trace commands executed to display a list of active traces.</td>
</tr>
<tr>
<td>DISPLAY UTILITY</td>
<td>Display Utility commands executed to display status information about DB2 utility jobs.</td>
</tr>
<tr>
<td>MODIFY TRACE</td>
<td>Modify Trace commands executed to change the IFCIDs being traced for an active trace.</td>
</tr>
<tr>
<td>RECOVER BSDS</td>
<td>Recover BSDS commands executed to recover a bootstrap dataset that has been disabled by an error.</td>
</tr>
<tr>
<td>RECOVER INDOUBT</td>
<td>Recover Indoubt commands executed to recover threads left in the indoubt status.</td>
</tr>
<tr>
<td>RESET GENERICLU</td>
<td>Reset GENERICLU commands executed to purge information stored by VTAM in the coupling facility for one or more partners of a particular DB2 subsystem. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>RESET INDOUBT</td>
<td>Reset Indoubt commands executed to purge indoubt thread information.</td>
</tr>
<tr>
<td>SET ARCHIVE</td>
<td>Set Archive commands executed to change the maximum tape units and the de-allocation time parameters originally set in the installation parameters.</td>
</tr>
<tr>
<td>START DATABASE</td>
<td>Start Database commands executed to make stopped databases available for use.</td>
</tr>
<tr>
<td>START DB2</td>
<td>Start DB2 commands executed.</td>
</tr>
<tr>
<td>START DDF</td>
<td>Start DDF commands executed to start the distributed data facility.</td>
</tr>
<tr>
<td>START PROCEDURE</td>
<td>Start Procedure commands executed to activate the definition of a stored procedure which was stopped, or refreshes a stored procedure that is cached. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>START RLIMIT</td>
<td>Start Rlimit commands executed to start the resource limit facility.</td>
</tr>
<tr>
<td>START TRACE</td>
<td>Start Trace commands executed to begin collection of DB2 trace records.</td>
</tr>
<tr>
<td>STOP DATABASE</td>
<td>Stop Database commands executed to make specified databases unavailable for use.</td>
</tr>
<tr>
<td>STOP DB2</td>
<td>Stop DB2 commands executed.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>STOP DDF</td>
<td>Stop DDF commands executed to stop the distributed data facility.</td>
</tr>
<tr>
<td>STOP PROCEDURE</td>
<td>Stop Procedure commands executed to prevent DB2 from accepting SQL CALL</td>
</tr>
<tr>
<td></td>
<td>statements for one or more stored procedure. This field appears only for</td>
</tr>
<tr>
<td></td>
<td>DB2 Version 4 and above.</td>
</tr>
<tr>
<td>STOP RLIMIT</td>
<td>Stop Rlimit commands executed to stop the resource limit facility.</td>
</tr>
<tr>
<td>STOP TRACE</td>
<td>Stop Trace commands executed to stop collection of DB2 trace records.</td>
</tr>
<tr>
<td>TERM UTILITY</td>
<td>Term Utility commands executed to terminate execution of a utility job.</td>
</tr>
<tr>
<td>UNRECOGNIZED COMMAND</td>
<td>Number of unrecognized commands.</td>
</tr>
<tr>
<td>Total</td>
<td>All DB2 commands.</td>
</tr>
</tbody>
</table>
Introduction

The application trace facility (ATF) provides you with the ability to selectively trace the execution of a DB2 application. The information gathered in these traces assists in the analysis of application flow and resource consumption. The application trace facility provides the following types of performance information:

- SQL trace information
- Sort activity information
- Pageset access and scan information
- Locking information
- Application in-DB2 Time and in-DB2 CPU Time

The classic OMEGAMON II interface provides the application trace facility information through a series of 14 screens:

In addition, the asynchronous batch facility, which is available only from the CUA interface, provides the ability to start and stop traces asynchronously. Once the application trace facility collects the real time and asynchronous batch data, it stores it in a VSAM dataset.

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- Stop Viewing Trace Dataset ......................................................... 297
Application Trace Facility Menu

The Application Trace Facility Menu allows you to access screens on which you can start an application trace, store trace data, review the data collected by an application trace, stop an application trace, and release the storage dataset.

Highlighting

OMEGAMON II does not highlight any fields on the Application Trace Facility Menu.

Navigation

For additional options
- choose one of the options from the menu.
- use the OMEGAMON II function keys.

Fields

The Application Trace Facility Menu does not display any output fields. It displays navigation options to other application trace facility screens. The following is a short description of some of the navigation options available from the Application Trace Facility Menu:

Specify Trace Provides a fill-in-the-blank screen to identify the application to trace. Also allows you to specify a dataset in which to capture the trace data for later viewing.

View Trace Displays the data collected by the active application trace.

Stop Trace Stops the trace of the specified application.

Select Dataset Allows you to select a dataset that contains stored trace data.

View Dataset Allows you to view the data in the selected trace dataset.

Stop View Releases a previously selected trace dataset from OMEGAMON II.
Specify Application Trace

The Specify Application Trace screen allows you to select the trace criteria for the application to be traced. It also allows you to specify a dataset where trace data will be stored so that you can analyze it later.

Highlighting

OMEGAMON II does not highlight any fields on the Specify Application Trace screen.

Navigation

For additional options, use the OMEGAMON II function keys.

Fields

Using the application trace facility, you can trace an individual plan or all plans (threads) executing in the DB2 system. It is strongly recommended that you qualify your trace request as much as possible to limit trace overhead incurred by both the DB2 subsystem and OMEGAMON II. To qualify a trace request, enter the required information for only one of the connection types (TSO, batch, CICS, or IMS).

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSN</td>
<td>The name of a VSAM dataset. If you want trace data to be saved for later viewing, enter the name of a preallocated, preformatted dataset; otherwise, leave this field blank. (See the procedure for customizing the application trace facility in the OMEGAMON II for DB2 Configuration and Customization Guide.) The ATF uses only the primary extent of a dataset; it does not use secondary extents. Keep this in mind when considering space requirements for the trace data.</td>
</tr>
<tr>
<td>TIME</td>
<td>The amount of time (in minutes) that OMEGAMON II will trace the application. The default is 5 minutes. The trace time can be any value between 1 and 60 minutes. The length of the application trace should be minimized to limit the resource utilization (CPU, memory) required by the facility.</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>The DB2 plan name of the application thread to be traced. This field is required. To trace all thread activity, set the plan name to ALL.</td>
</tr>
<tr>
<td>AUTHID</td>
<td>The DB2 authorization ID of the application (thread) to be traced. It is optional; however, it is strongly recommended that an authid be supplied to limit trace overhead and the amount of data collected.</td>
</tr>
<tr>
<td>TSOUSER</td>
<td>The TSO user ID of the application (thread) to be traced if the application originates from a DB2 TSO connection. This lets you further limit the amount of trace data collected and overhead incurred.</td>
</tr>
<tr>
<td>JOBNAME</td>
<td>The jobname of the application (thread) to be traced if the application originates from a DB2 batch (TSO background) connection. This limits the amount of trace data collected and overhead incurred.</td>
</tr>
</tbody>
</table>
Specify Application Trace

**CICSTRAN**
The transaction ID of the application (thread) to be traced if the application originates from a DB2 CICS connection. This limits the amount of trace data collected and overhead incurred.

**CICSCONN**
The DB2 connection ID of the CICS region from which the application (thread) originates. This limits the amount of trace data collected and overhead incurred.

**PSBNAME**
The IMS PSB name of the application (thread) if the application originates from the DB2 IMS connection. This limits the amount of trace data collected and overhead incurred.

**IMSID**
The IMSID of the IMS region from which the application (thread) originates. This limits the amount of trace data collected and overhead incurred.

**LOCKDATA**
Specify NO to inhibit collection of DB2 lock trace records. This will reduce the number of trace records captured and reduce overhead.

**SCANDATA**
Specify NO to inhibit collection of DB2 scan trace records. This will reduce the number of trace records captured and reduce overhead.

**SQLDATA**
Specify NO to inhibit collection of DB2 SQL trace records. This will reduce the number of trace records captured and reduce overhead.

**THRDDATA**
Specify NO to inhibit collection of DB2 thread trace records. This will reduce the number of trace records captured and reduce overhead.

**CONNDATA**
Specify NO to inhibit collection of DB2 connection trace records. This will reduce the number of trace records captured and reduce overhead.

**SMF**
Specifies whether the trace data will be written out to SMF in addition to the capture. The default is N. SMF and GTF are mutually exclusive fields. You can specify N for both fields, but not Y.

**GTF**
Specifies whether the trace data will be written out to GTF in addition to the capture. The default is N. SMF and GTF are mutually exclusive fields. You can specify N for both fields, but not Y.

**MEMSIZE**
Specifies the workarea size for in-core collection. The default workarea size is 2M, and the maximum limit is 4M.

When you complete the fields on this screen and press Enter, OMEGAMON II displays a confirmation screen that contains the values you supplied. To start the application trace using these values, press Enter. To change the values without starting a trace, press F3.
The Application Trace Thread Summary screen displays information about the status of the current trace and an overview of the application (DB2 thread) information it collected.

Highlighting

OMEGAMON II does not highlight any fields on the Application Trace Thread Summary screen.

Navigation

For additional information about
- a particular thread, move the cursor to the thread line and press the zoom key (F11).
- other topics, use the OMEGAMON II function keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**Trace Status**

- The current status of the active trace: Active or Inactive. OMEGAMON II displays **Inactive** when the amount of time specified on the trace request has elapsed and application trace collection has terminated. OMEGAMON II displays **Active** when the trace is still collecting data.

**Trace Time Remaining**

- The amount of time remaining if the trace is still active. If the trace is inactive, this field contains zeros.

**Trace Start Time**

- The time the trace started.

**Trace End Time**

- The time the trace stopped if trace status is inactive. If the trace is still active, this field contains zeros.

**Trace Time Limit**

- The trace time limit specified when the trace was started.

**Trace Records Collected**

- The number of trace records collected.

**Dataset Capture Statistics**

The following fields appear if a dataset was specified for data capture on the Specify Application Trace screen.

**DSN**

- The name of the specified dataset.

**Trace records captured**

- The number of trace records captured.
Trace Request Information

This section displays the request criteria that you used to request the trace on the Specify Application Trace screen.

Active Threads

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planname</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
<tr>
<td>InDB2 CPU</td>
<td>The amount of CPU time used by the thread while executing in DB2. It is expressed in seconds.</td>
</tr>
<tr>
<td>SQL</td>
<td>The total number of SQL statements issued by the thread.</td>
</tr>
<tr>
<td>Commits</td>
<td>The total number of commits that occurred for the thread.</td>
</tr>
<tr>
<td>Aborts</td>
<td>The total number of aborts that occurred for the thread.</td>
</tr>
</tbody>
</table>
Application Trace Unit of Work Summary

This display summarizes unit of work activity for a selected thread. A single line of output is produced for every commit or abort (either in-flight or complete) that had associated SQL activity. This enables the user to evaluate application resource use on a thread unit of work basis. Unit of work entries are displayed in LIFO (last in first out) order.

For more detailed analysis, you can zoom on a display line and continue analysis of application flow and resource analysis.

Highlighting

OMEGAMON II does not highlight any fields on the Application Trace Unit of Work Summary screen.

Navigation

For additional information about

- a particular unit of work, move the cursor to the desired line and press the zoom key (F11).
- other topics, use the OMEGAMON II function keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Planname**: The DB2 plan name of the application.
- **Connid**: The DB2 connection identifier of the application.
- **Corrid**: The DB2 correlation identifier of the application.
- **Authid**: The DB2 authorization identifier of the application.
- **Date**: The date on which the commit or abort (unit of work) occurred. This field appears only when you are viewing trace data from a dataset.
- **Start Time**: The start time of the DB2 commit/abort (unit of work).
- **Progname**: The first application program name located for the thread commit or abort (unit of work).
- **InDB2 Time**: The amount of In DB2 time for the thread commit or abort (unit of work). For parallel task activity, this value represents the sum of the parent and child tasks.
- **SQL**: The number of SQL calls issued in the DB2 unit of work.
- **Sorts**: The number of sorts processed in the DB2 unit of work.
**Locks**  
The number of locks acquired in the DB2 unit of work. For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows**  
The number of rows processed in the DB2 unit of work. For parallel task activity, this value represents the sum of the parent and child tasks.
Application Trace Program Summary

The Application Trace Program Summary screen displays information about the traced application thread unit of work at the program level. OMEGAMON II displays a single line summary of each program that executed at least one SQL call during the trace.

**Highlighting**

OMEGAMON II does not highlight any fields on the Application Trace Program Summary screen.

**Navigation**

For additional information about
- a particular program, move the cursor to the program line and press the zoom key (F11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II function keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Planname**: The DB2 plan name of the application.
- **Connid**: The DB2 connection identifier of the application.
- **Corrid**: The DB2 correlation identifier of the application.
- **Authid**: The DB2 authorization identifier of the application.
- **Progname**: The application program name invoked by application.
- **InDB2 Time**: The amount of elapsed time incurred while executing in DB2.
- **InDB2 CPU**: The amount of CPU time incurred while executing in DB2. The value is expressed in 1000ths of seconds. For parallel task activity, this value represents the sum of the parent and child tasks.
- **SQL**: The total number of SQL requests issued by the program.
- **Sorts**: The total number of sorts due to SQL activity issued by the program.
- **Locks**: The total number of locks that were acquired by SQL statements issued by the program. For parallel task activity, this value represents the sum of the parent and child tasks.
- **Pages**: The total number of pages that were referenced (scanned) by the program. For parallel task activity, this value represents the sum of the parent and child tasks.
- **Rows**: The total number of rows that were examined (scanned) by the program. For parallel task activity, this value represents the sum of the parent and child tasks.
Application Trace Program Detail

The Application Trace Program Detail screen displays application trace detail information at the program level for a traced application thread unit of work. Following the thread information, the display is logically broken down into four areas for easy evaluation of program efficiency and DB2 resource usage: SQL, sort, scan, and lock.

Highlighting

OMEGAMON II does not highlight any fields on the Application Trace Program Detail screen.

Navigation

For additional options use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

Thread Information

- **Planname**: The DB2 plan name of the application.
- **Connid**: The DB2 connection identifier of the application.
- **Corrid**: The DB2 correlation identifier of the application.
- **Authid**: The DB2 authorization identifier of the application.
- **Program Name**: The application program name for which information is being displayed.

SQL Summary Information

- **SQL Call**: The SQL statement type.
- **Stmt#**: The statement number of the SQL statement. This is the actual SQL statement number generated by the DB2 precompiler and is contained in the precompiler program output listing.
- **Count**: The total number of executions of the SQL statement.
- **InDB2 Time**: The amount of elapsed time spent executing in DB2 to process the SQL statements.
- **InDB2 CPU**: The amount of elapsed CPU time used executing in DB2 to process the SQL statements. For parallel task activity, this value represents the sum of the parent and child tasks.
- **Avg Time**: The average amount of elapsed time spent executing in DB2 per SQL statement.
- **Avg CPU**: The average amount of CPU time used while executing in DB2 to process the SQL statement.
### Sort Summary Information

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQL Call</strong></td>
<td>The SQL statement causing sort processing to be invoked.</td>
</tr>
<tr>
<td><strong>Stmt#</strong></td>
<td>The SQL statement number causing sort processing to be invoked.</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td>The number of times that the SQL statement invoked a sort.</td>
</tr>
<tr>
<td><strong>Sort Time</strong></td>
<td>The amount of elapsed time spent in sort processing that is required to satisfy the call.</td>
</tr>
<tr>
<td><strong>Recs</strong></td>
<td>The total number of records sorted.</td>
</tr>
<tr>
<td><strong>Reads</strong></td>
<td>The number of records retrieved from a work file during sort processing.</td>
</tr>
<tr>
<td><strong>Inserts</strong></td>
<td>The number of records inserted into a work file during sort processing.</td>
</tr>
<tr>
<td><strong>Wfiles</strong></td>
<td>The number of logical workfiles used during sort processing.</td>
</tr>
</tbody>
</table>

### Lock Summary Information

No data will appear in this area if you set LOCKDATA equals NO on the Specify Application Trace screen. For parallel task activity, these values include locks held by both parent and child tasks.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>The lock type owned. Every lock type owned by the thread will be displayed. For more information about lock types, see “Lock Types and Lock Levels” on page 611.</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>The lock levels of the various lock types owned. All lock levels owned within a lock type will be listed. Lock levels may appear repetitively for a single lock type due to the different resources owned by the locks. For more information about lock levels, see “Lock Types and Lock Levels” on page 611.</td>
</tr>
<tr>
<td><strong>Resource</strong></td>
<td>The resource that is the object of the lock. The content of the Resource field is dependent on lock type. For data page (DPAG) and index page (IPAG) locks, the resource does not contain the actual data page number that is locked; it lists the database and pageset that own the data or index page lock. The Count field will then display how many data or index page locks exist within the resource (pageset) listed. For more information about lock resources, see “Lock Types and Lock Levels” on page 611.</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td>The number of locks meeting the type, level, and resource description of the lock.</td>
</tr>
</tbody>
</table>
### Scan Summary Information

No data will appear in this area if you set SCANDATA equals NO on the Specify Application Trace screen. For parallel task activity, these values represent the sum of the parent and child tasks.

<table>
<thead>
<tr>
<th>Scan Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index</strong></td>
<td>index scan</td>
</tr>
<tr>
<td><strong>Sequential</strong></td>
<td>sequential data tablespace scan</td>
</tr>
<tr>
<td><strong>Insert</strong></td>
<td>scan for a space to insert a new row</td>
</tr>
<tr>
<td><strong>Hash</strong></td>
<td>scan used for directory DSNDDB01 database access</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Database</th>
<th>The database that was the object of the scan.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Scan Count</th>
<th>The number of scans of the corresponding scan type generated by program SQL activity.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pageset</th>
<th>The pageset that was the object of the scan.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Data Type</th>
<th>The type of statistics displayed:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INDX</strong></td>
<td>index pageset</td>
</tr>
<tr>
<td><strong>DATA</strong></td>
<td>data pageset</td>
</tr>
<tr>
<td><strong>WORK</strong></td>
<td>data workfile (DSNDB07) pageset</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rows Process</th>
<th>The number of rows processed by the data manager. This count may include some rows that belong to a table other than the referenced table (such rows are rejected before the data manager applies the qualifying stage 1 predicates).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows Looked</th>
<th>The number of rows examined by the data manager. This count includes only rows that belong to the referenced table, and to which the data manager applied the stage 1 predicates.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows Qual/DM</th>
<th>The number of rows qualified by the data manager (stage 1).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows Qual/RD</th>
<th>The number of rows qualified by the relational data manager (stage 2).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows Update</th>
<th>The number of rows updated.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows Insert</th>
<th>The number of rows inserted.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows Delete</th>
<th>The number of rows deleted.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rows De/REF</th>
<th>The number of rows deleted or set to null due to enforcement of defined referential integrity constraints.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pages Scand</th>
<th>The total number of pages scanned by the data manager.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pages Sc/REF</th>
<th>The total number of pages scanned due to enforcement of defined referential integrity constraints.</th>
</tr>
</thead>
</table>
Application Trace SQL Index

The Application Trace SQL Index screen displays one line of summary information about each SQL statement associated with the unit of work you are investigating. The SQL calls are presented in the order of their execution.

You can select a particular call for detailed analysis by placing the cursor on that line and pressing the zoom key.

Highlighting

OMEGAMON II does not highlight any fields on the Application Trace SQL Index screen.

Navigation

For additional information about

- a particular SQL statement, move the cursor to the statement line and press the zoom key (F11).
- other topics, use the OMEGAMON II function keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planname</td>
<td>The DB2 plan name of the active thread.</td>
</tr>
<tr>
<td>Connnid</td>
<td>The DB2 connection identifier of the active thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the active thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the active thread.</td>
</tr>
<tr>
<td>Call Type</td>
<td>The SQL statement type.</td>
</tr>
<tr>
<td>Stmt#</td>
<td>The SQL statement number. This is the actual statement number generated by the DB2 precompiler; it is contained in the precompiler program output listing.</td>
</tr>
<tr>
<td>Program</td>
<td>The program name in which the SQL statement was executed.</td>
</tr>
<tr>
<td>Count</td>
<td>The number of times this statement was executed consecutively.</td>
</tr>
<tr>
<td>InDB2 Time</td>
<td>The amount of elapsed time spent executing the SQL statement (or group of statements if Count is greater than 1).</td>
</tr>
<tr>
<td>MRet</td>
<td>The maximum return code encountered when executing the SQL statement.</td>
</tr>
<tr>
<td>Rws PC</td>
<td>The total number of index/data/work rows of all record types processed by the Data Manager. For parallel task activity, this value represents the sum of the parent and child tasks.</td>
</tr>
</tbody>
</table>
Rws DM  The total number of index/data/work rows qualified by the Data Manager. For parallel task activity, this value represents the sum of the parent and child tasks.

Rws RD  The total number of index/data/work rows qualified by the Relational Data Manager. For parallel task activity, this value represents the sum of the parent and child tasks.
The Application Trace SQL Detail screen displays information about the traced application at the SQL statement level. The screen also displays the text of all dynamic SQL calls.

**Highlighting**

OMEGAMON II does not highlight any fields on the Application Trace SQL Detail screen.

**Navigation**

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II function keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. The data in the fields is refreshed each time you press Enter, displaying detail for another SQL call.

When the detail pertains to a dynamic SQL call (SQL Call is PREPARE), the screen also displays the text of the call and access path information. You can view both dynamic and static SQL call text on the SQL Call Being Executed screen (see “SQL Call Being Executed” on page 120).

**Planname**

The DB2 plan name of the active thread.

**Connid**

The DB2 connection identifier of the active thread.

**Corrid**

The DB2 correlation identifier of the active thread.

**Authid**

The DB2 authorization identifier of the active thread.

**Control**

The next SQL statement OMEGAMON II displays. This screen initially displays the first SQL statement collected for the thread. Use these keywords to control the display:

- **FIRST**
  - First SQL statement encountered for the thread.

- **LAST**
  - Last SQL statement encountered for the thread.

- **NEXT**
  - Next SQL statement encountered for the thread.

- **-nnnnn**
  - The nnnnn (1-99999) entry before the currently displayed SQL statement.

- **+nnnnn**
  - The nnnnn (1-99999) entry after the currently displayed SQL statement.

- **Snnnnn**
  - Statement number nnnnn.

**Current**

The relative number of the SQL statement currently being displayed. This is relative to the total number of calls located for the DB2 unit of work.
**Total Number of SQL Calls**

The total number of SQL calls located for the DB2 unit of work.

**Start Time**

The time the SQL statement was issued.

**Proname**

The name of program that issued the SQL statement.

**SQL Call**

The SQL statement type.

**Stmt#**

The SQL statement precompiler statement number.

**Retcode**

The SQL statement return code returned to the application in the SQLCA.

**InDB2 Time**

The amount of elapsed wall clock time spent executing the SQL call.

**InDB2 CPU**

The amount of CPU time used executing the SQL statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Data Type**

The type of statistics displayed:

- **INDEX**: index pageset
- **DATA**: data pageset
- **WORK**: data workfile (DSNDB07) pageset

**Rows Process**

The number of rows processed by the data manager for the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows Looked**

The number of rows looked at/examined by the data manager for the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows Qual/DM**

The number of rows qualified by the data manager for the statement (stage 1). For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows Qual/RD**

The number of rows qualified by the relational data manager for the statement (stage 2). For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows Update**

The number of rows updated by the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows Insert**

The number of rows inserted by the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows Delete**

The number of rows deleted by the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Rows De/Ref**

The number of rows deleted or set to null due to enforcement of defined referential integrity constraints for the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Pages Scand**

The total number of pages scanned by the data manager for the statement. For parallel task activity, this value represents the sum of the parent and child tasks.

**Pages Sc/Ref**

The total number of pages scanned due to enforcement of defined referential integrity constraints for the statement. For parallel task activity, this value represents the sum of the parent and child tasks.
Dynamic SQL Call Text
The complete text of the SQL statement is displayed in this area if it is a dynamic call.

Miniplan Generated by DB2
Access path information is displayed in this area if the SQL statement is a PREPARE for a SELECT, UPDATE, INSERT, or DELETE statement. A plan for each select block within the prepared SQL statement is provided.

<table>
<thead>
<tr>
<th><strong>Estimated Cost</strong></th>
<th>The cost factor generated by the DB2 Optimizer for this SQL statement.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table</strong></td>
<td>The name of the table being accessed.</td>
</tr>
<tr>
<td><strong>Access Type</strong></td>
<td>The method in which the table is accessed. Possible values:</td>
</tr>
<tr>
<td></td>
<td>INDEX Index will be used to access table data.</td>
</tr>
<tr>
<td></td>
<td>INDEX (ONE-FETCH) Index will be used to determine which data page is</td>
</tr>
<tr>
<td></td>
<td>needed for processing. This type of access is used for processing</td>
</tr>
<tr>
<td></td>
<td>MIN and MAX functions.</td>
</tr>
<tr>
<td></td>
<td>INDEX (IN KEYWORD) Index will be used to access table data for</td>
</tr>
<tr>
<td></td>
<td>processing the IN keyword in SQL statements.</td>
</tr>
<tr>
<td></td>
<td>INDEX (PAGE RANGE) Index will be used to access table data in a</td>
</tr>
<tr>
<td></td>
<td>particular page range.</td>
</tr>
<tr>
<td></td>
<td>SEQUENTIAL SCAN All pages in the tablespace (or table if the</td>
</tr>
<tr>
<td></td>
<td>tablespace is segmented) will be accessed sequentially.</td>
</tr>
<tr>
<td></td>
<td>SEQUENTIAL SCAN (PAGE RANGE) All pages within a particular page range</td>
</tr>
<tr>
<td></td>
<td>of the partitioned tablespace will be accessed sequentially.</td>
</tr>
<tr>
<td><strong>Index</strong></td>
<td>The name of the index used. If more than one index is used, only the</td>
</tr>
<tr>
<td></td>
<td>first index is displayed.</td>
</tr>
<tr>
<td><strong>Matching Cols</strong></td>
<td>The number of index keys used in the index scan.</td>
</tr>
<tr>
<td><strong>Join Method</strong></td>
<td>Type of join being performed. Possible values are NESTED LOOP, HYBRID,</td>
</tr>
<tr>
<td></td>
<td>and MERGE SCAN.</td>
</tr>
<tr>
<td><strong>Table Type</strong></td>
<td>Indicates whether the table is the INNER or OUTER table for the join</td>
</tr>
<tr>
<td></td>
<td>processing.</td>
</tr>
</tbody>
</table>
**Sort Activity**

The reason for the sort. If no sort is performed, this field will not appear.

Possible values:

- **UNIQ**
  - Sort to remove duplicate rows.
- **JOIN**
  - Sort needed for join processing.
- **ORDER**
  - Sort needed to satisfy Order By clause.
- **GROUP**
  - Sort needed to satisfy Group By clause.
- **UNIQ(C)**
  - Sort to remove duplicate rows (composite table).
- **JOIN(C)**
  - Sort needed for join processing (composite table).
- **ORDER(C)**
  - Sort needed to satisfy Order By clause (composite table).
- **GROUP(C)**
  - Sort needed to satisfy Group By clause (composite table).

**Prefetch Activity**

The type of prefetch activity being performed. If no prefetch is performed, this field will not appear. Possible values:

- **SEQUENTIAL**
  - Sequential prefetch.
- **LIST**
  - List prefetch for one or more indexes.
The Application Trace Lock Detail screen provides a summary of all locks acquired as a result of the SQL statement.

**Highlighting**

OMEGAMON II does not highlight any fields on the Application Trace Lock Detail screen.

**Navigation**

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II function keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. The data in the fields is refreshed each time you press Enter, displaying detail for another SQL call. For parallel task activity, these values include locks held by parent and child tasks.

*Note: No data will appear on this screen if LOCKDATA=NO on the Specify Application Trace screen.*

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plannname</strong></td>
<td>The DB2 plan name of the active thread.</td>
</tr>
<tr>
<td><strong>Connid</strong></td>
<td>The DB2 connection identifier of the active thread.</td>
</tr>
<tr>
<td><strong>Corrid</strong></td>
<td>The DB2 correlation identifier of the active thread.</td>
</tr>
<tr>
<td><strong>Authid</strong></td>
<td>The DB2 authorization identifier of the active thread.</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>The next SQL statement OMEGAMON II displays. This screen initially displays the first SQL statement collected for the thread. Use these keywords to control the display:</td>
</tr>
<tr>
<td>FIRST</td>
<td>First SQL statement encountered for the thread.</td>
</tr>
<tr>
<td>LAST</td>
<td>Last SQL statement encountered for the thread.</td>
</tr>
<tr>
<td>NEXT</td>
<td>Next SQL statement encountered for the thread.</td>
</tr>
<tr>
<td>+nnnnn</td>
<td>The nnnnn (1-99999) entry after the currently displayed SQL statement.</td>
</tr>
<tr>
<td>-nnnnn</td>
<td>The nnnnn (1-99999) entry before the currently displayed SQL statement.</td>
</tr>
<tr>
<td>Snnnnn</td>
<td>Statement number nnnnn.</td>
</tr>
<tr>
<td><strong>Current</strong></td>
<td>The relative number of the SQL statement currently being displayed. This is relative to the total number of calls located for the DB2 unit of work.</td>
</tr>
<tr>
<td><strong>Total Number of SQL Calls</strong></td>
<td>The total number of SQL calls located for the DB2 unit of work.</td>
</tr>
</tbody>
</table>
Start Time  The time the SQL statement was issued.
Progname  The name of program that issued the SQL statement.
SQL Call  The SQL statement precompiler statement number.
Stmt#  The SQL statement precompiler statement number.
PSET  The total number of pageset locks acquired by the SQL statement.
DPAG  The total number of datapage locks acquired by the SQL statement.
IPAG  The total number of index page locks acquired by the SQL statement.
OTHER  The total number of other types of locks acquired by the SQL statement.

Locks Acquired and Locks Owned Information

**TYPE**  The lock type owned. Every lock type owned by the thread will be
displayed. For more information about lock types, see “Lock Types and
Lock Levels” on page 611.

**LEVEL**  The lock levels of the various lock types owned. All lock levels owned
within a lock type will be listed. Lock levels may appear repetitively for a
single lock type due to the different resources owned by the locks.
For more information about lock levels, see “Lock Types and Lock
Levels” on page 611.

**RESOURCE**  The resource that is the object of the lock. The content of the Resource field
is dependent on lock type. For data page (DPAG) and index page (IPAG)
locks, the resource does not contain the actual data page number that is
locked; it lists the database and pageset that own the data or index page
lock. The Count field will then display how many data or index page locks
exist within the resource (pageset) listed.

*Note:* When you are using an ATF trace from VSAM, and the resource is a
table or a datapage in a segmented tablespace, OMEGAMON II will not
translate the PSID number into the table name. Instead, OMEGAMON II
displays the OBID of the DB2 table. (This is because OMEGAMON II uses
IFCID 105 and 107 to translate the object identifiers from lock records,
and those IFCIDs do not contain OBID-TABLENAME pairs.)
You can execute the following SQL statement to determine the DB2
tablename from the displayed PSID.

```
SELECT NAME, CREATOR
FROM SYSIBM.SYSTABLES
WHERE DBNAME= 'dbname' AND OBID= nn
```
For more information about lock resources, see “Lock Types and Lock
Levels” on page 611.

**COUNT**  The number of locks meeting the type, level, and resource description of
the lock.
The Application Trace Event Detail screen displays detailed information about the flow of an application. The information appears as a series of DB2 events, with each line describing a single event or action.

**Highlighting**

OMEGAMON II does not highlight any fields on the Application Trace Event Detail screen.

**Navigation**

For additional information about related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II function keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. The data in the fields is refreshed each time you press Enter, displaying detail for another SQL call.

- **Planname**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.
The next SQL statement OMEGAMON II displays. This screen initially displays the first SQL statement collected for the thread. Use these keywords to control the display:

FIRST First SQL statement encountered for the thread.
LAST Last SQL statement encountered for the thread.
NEXT Next SQL statement encountered for the thread.
Previous statement encountered for the thread.
+nnnnn The nnnnn (1-99999) entry after the currently displayed SQL statement.
-nnnnn The nnnnn (1-99999) entry before the currently displayed SQL statement.
Snnnnn Statement number nnnnn.
TOP Display the first LROWS (number of logical rows) records for the current SQL statement.
BOTTOM Display the last LROWS records for the current SQL statement.
UP Scroll up approximately LROWS records from the current display for the current SQL statement.
DOWN Scroll down approximately LROWS records from the current display for the current SQL statement.

Current The relative number of the SQL statement currently being displayed. This is relative to the total number of calls located for the DB2 unit of work.

Total Number of SQL Calls The total number of SQL calls located for the DB2 unit of work.

Event Time The time the event described started.

TN For parallel processing, this field contains the task number of the child task to which this event applies. For a parent task, or where there is no parallel task activity, this field is blank. The task numbers are assigned arbitrarily at display time to help you distinguish the activity of particular child tasks. Task numbers are not provided by DB2. Events relating to each child task are grouped together following those of the parent task.
### Event Type

The DB2 event description. The events displayed are as follows:

- Create Thread
- End Abort
- End Commit
- End Commit Phase I
- End Commit Phase II
- End Index Scan
- End Insert Scan
- End of Sort
- End Sequential Scan
- End Signon
- End SQL call (all possible SQL statement types)
- Lock Acquire
- Lock Change
- Lock Release
- Start Abort
- Start Commit
- Start Commit Phase I
- Start Commit Phase II
- Start Index Scan
- Start Insert Scan
- Start of Sort
- Start Sequential Scan
- Start Signon
- Start SQL call (all possible SQL statement types)
- Terminate Thread

### Event Resource Information

Additional information related to the event listed. The following table lists and briefly describes all possible event tokens that can appear in this field.

<table>
<thead>
<tr>
<th>Event Token</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBP</td>
<td>Alter buffer pool lock.</td>
</tr>
<tr>
<td>BIND</td>
<td>Autobind/remote bind lock</td>
</tr>
<tr>
<td>CDRN</td>
<td>Cursor stability read drain lock</td>
</tr>
<tr>
<td>COLL</td>
<td>Collection lock.</td>
</tr>
<tr>
<td>Event Token</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>D=x</td>
<td>Lock duration. Possible values:</td>
</tr>
<tr>
<td></td>
<td><strong>ALC</strong></td>
</tr>
<tr>
<td></td>
<td><strong>CMT</strong></td>
</tr>
<tr>
<td></td>
<td><strong>CM+</strong></td>
</tr>
<tr>
<td></td>
<td><strong>FRE</strong></td>
</tr>
<tr>
<td></td>
<td><strong>INT</strong></td>
</tr>
<tr>
<td></td>
<td><strong>MNL</strong></td>
</tr>
<tr>
<td></td>
<td><strong>MN+</strong></td>
</tr>
<tr>
<td></td>
<td><strong>PLN</strong></td>
</tr>
<tr>
<td></td>
<td><strong>UND</strong></td>
</tr>
<tr>
<td>DB=x</td>
<td>Database name.</td>
</tr>
<tr>
<td>DPAG</td>
<td>Data page lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>DSET</td>
<td>Partitioned lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>DTBS</td>
<td>Database lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>HASH</td>
<td>Hash anchor lock.</td>
</tr>
<tr>
<td>IPAG</td>
<td>Index page lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>IS</td>
<td>Intent share lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>IX</td>
<td>Intent exclusive lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>PAGES=n</td>
<td>Number of pages scanned.</td>
</tr>
<tr>
<td>PDSO</td>
<td>Pageset or partitioned pageset open lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>PGM=x</td>
<td>DBRM name.</td>
</tr>
<tr>
<td>PS=x</td>
<td>For scan activity, the name of the indexspace or tablespace that caused the lock.</td>
</tr>
<tr>
<td></td>
<td>For lock activity, the name of the pageset that caused the lock.</td>
</tr>
<tr>
<td>PSET</td>
<td>Pageset lock. (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>Event Token</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>PSPI</td>
<td>Pageset piece lock. (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>RDRN</td>
<td>Repeatable read drain lock.</td>
</tr>
<tr>
<td>RECS=n</td>
<td>Number of records sorted.</td>
</tr>
<tr>
<td>ROWS=n</td>
<td>Number of rows processed.</td>
</tr>
<tr>
<td>RSIZE=n</td>
<td>Sort record size (in bytes).</td>
</tr>
<tr>
<td>S</td>
<td>Shared lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>SDBA</td>
<td>Start/stop lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>SIX</td>
<td>Share with intent exclusive lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>SKCT</td>
<td>Skeleton cursor table lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>SKPT</td>
<td>Skeleton package table lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>SREC</td>
<td>Log range lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>STMT=n</td>
<td>DBRM statement number.</td>
</tr>
<tr>
<td>TABL</td>
<td>Table lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>U</td>
<td>Update (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>UNDT</td>
<td>Undetermined lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>UTSE</td>
<td>Utility serialization lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
<tr>
<td>WDRN</td>
<td>Write drain lock.</td>
</tr>
<tr>
<td>X</td>
<td>Exclusive lock (more information in “Lock Types and Lock Levels” on page 611).</td>
</tr>
</tbody>
</table>
Stop Application Trace Request

The Stop Application Trace Request screen allows you to stop an application trace that is currently active. Application trace is normally terminated after the trace time limit specified during the trace request has expired. This display provides an alternate, manual method of terminating application trace collection.

Stopping trace collection does not delete trace information collected. It simply stops the active trace request. All data collected prior to trace termination is still available for viewing.

Highlighting

OMEGAMON II does not highlight any fields on the Stop Application Trace Request screen.

Navigation

For additional options, use the OMEGAMON II function keys.

Fields

OMEGAMON II does not display any fields on the Stop Application Trace Request screen.
Select Dataset and Trace Parameters

The Select Dataset and Trace Parameters screen allows you to select a dataset so that you can view the trace data it contains. The dataset must be a VSAM dataset that was (1) used to capture an application trace (by specifying the dataset name on the Specify Application Trace screen), or (2) used to store performance data gathered from SMF or GTF by the historical data extractor.

Highlighting

OMEGAMON II does not highlight any fields on the Select Dataset and Trace Parameters screen.

Navigation

For additional options, use the OMEGAMON II function keys.

Fields

Using the select trace dataset facility, you can select and view an individual plan or all plans (threads) that were saved in the trace dataset. It is strongly recommended that you qualify your view request as much as possible to limit the reporting overhead incurred by OMEGAMON II. To qualify a view request, enter the required information for only one of the connection types (TSO, batch, CICS, or IMS), and specify the time period to be reported.

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSN</td>
<td>The VSAM dataset that contains the captured trace information.</td>
</tr>
<tr>
<td>STARTDATE</td>
<td>The starting date delimiting the records to be displayed.</td>
</tr>
<tr>
<td>STARTTIME</td>
<td>The starting time delimiting the records to be displayed.</td>
</tr>
<tr>
<td>ENDDATE</td>
<td>The ending date delimiting the records to be displayed.</td>
</tr>
<tr>
<td>ENDTIME</td>
<td>The ending time delimiting the records to be displayed.</td>
</tr>
<tr>
<td>DB2ID</td>
<td>The identifier of the DB2 subsystem to be monitored.</td>
</tr>
<tr>
<td>MVSID</td>
<td>The identifier of the MVS where the monitored DB2 resides.</td>
</tr>
<tr>
<td>PLANNAME</td>
<td>The DB2 plan name of the application thread to be selected. This field is required. To see trace data for all thread activity, set the plan name to ALL.</td>
</tr>
<tr>
<td>AUTHID</td>
<td>The DB2 authorization ID of the application (thread) to be selected. It is optional; however, it is strongly recommended that an authid be supplied to limit the amount of trace data reported.</td>
</tr>
<tr>
<td>TSOUSER</td>
<td>The TSO user ID of the application (thread) to be selected if the application originates from a DB2 TSO connection. This lets you further limit the amount of trace data reported.</td>
</tr>
</tbody>
</table>
Select Dataset and Trace Parameters

**JOBNAME**

The jobname of the application (thread) to be selected if the application originates from a DB2 batch (TSO background) connection. This limits the amount of trace data reported.

**CICSTRAN**

The transaction ID of the application (thread) to be selected if the application originates from a DB2 CICS connection. This limits the amount of trace data reported.

**CICSCONN**

The DB2 connection ID of the CICS region from which the application (thread) originates. This limits the amount of trace data reported.

**PSBNAME**

The IMS PSBname of the application (thread) if the application originates from the DB2 IMS connection. This limits the amount of trace data reported.

**IMSID**

The IMSID of the IMS region from which the application (thread) originates. This limits the amount of trace data reported.
Application Trace Thread Summary—View Dataset

The Application Trace Thread Summary—View Dataset screen displays information about the trace parameters selected for the data captured by this dataset. It also provides an overview of the application (DB2 thread) information it collected or is collecting.

**Note:** Each time you navigate to this screen, and each time you press Enter on this screen, the dataset information is refreshed. So, if you are viewing trace data as it is being captured to a dataset, you can update the screen by pressing Enter.

**Highlighting**

OMEGAMON II does not highlight any fields on the Application Trace Thread Summary—View Dataset screen.

**Navigation**

For additional information about
- a particular thread, move the cursor to the thread line and press the zoom key (F11).
- other topics, use the OMEGAMON II function keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen. If you are viewing a dataset while it is capturing trace data, these fields are refreshed each time you press Enter.

**Trace Parameters**

- **DSN**
  - The name of the dataset specified for trace data capture.

- **Start Date**
  - The starting date delimiting data for the report.

- **Start Time**
  - The starting time delimiting data for the report.

- **End Date**
  - The ending date delimiting data for the report.

- **End Time**
  - The ending time delimiting data for the report.

**Trace Request Information**

This section displays the request criteria that you used to request the trace on the Specify Application Trace screen.

**Thread Information**

- **Planname**
  - The DB2 plan name of the thread.

- **Connid**
  - The DB2 connection identifier of the thread.

- **Corrid**
  - The DB2 correlation identifier of the thread.

- **Authid**
  - The DB2 authorization ID of the thread.

- **DB2**
  - The identifier of the DB2 subsystem that was monitored.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS</td>
<td>The identifier of the MVS where the monitored DB2 resides.</td>
</tr>
<tr>
<td>InDB2 CPU</td>
<td>The amount of CPU time used by the thread while executing in DB2. It is expressed in seconds.</td>
</tr>
<tr>
<td>Commits</td>
<td>The total number of commits located for the thread.</td>
</tr>
<tr>
<td>Aborts</td>
<td>The total number of aborts located for the thread.</td>
</tr>
</tbody>
</table>
Stop Viewing Trace Dataset

The Stop Viewing Trace Dataset screen allows you to release a dataset that was previously selected on the Select Dataset and Trace Parameters screen. When you execute this screen you make the dataset available for redefinition and/or recreation. The data will still be available for viewing after the dataset is released.

Highlighting

OMEGAMON II does not highlight any fields on the Stop Viewing Trace Dataset screen.

Navigation

For additional options, use the OMEGAMON II function keys.

Fields

OMEGAMON II does not display any fields on the Stop Viewing Trace Dataset screen.
Stop Viewing Trace Dataset
Introduction

OMEGAMON II provides information about distributed database activity through a variety of screens, some of which are documented in this chapter. Other Distributed Data Facility (DDF) information appears on screens that are documented elsewhere in this manual, such as the chapters called “Thread Information” on page 65 and “Resource Managers and Other DB2 Subsystem Information” on page 179.

Chapter Contents

- Distributed Data Facility Statistics ............................................ 300
- Distributed Data Facility VTAM Summary .................................. 304
- Distributed Data Facility VTAM Detail ...................................... 305
### Distributed Data Facility Statistics

The Distributed Data Facility (DDF) Statistics screen displays statistics about DDF activity, formatted by remote DB2 location. Each remote DB2 that has acted as a requester or a server to the monitored (local) DB2 is displayed, along with such statistics as number of transactions sent and received. Miscellaneous information about the local DB2 subsystem, such as send rate and receive rate, are also provided.

#### Highlighting

OMEGAMON II does not highlight any fields on this screen.

#### Navigation

For additional information about
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

#### Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>This field always displays <strong>REALTIME</strong> to indicate that you are looking at the realtime version of this screen, and not at the corresponding near-term history screen. On this screen, the collection interval and the report interval are the same.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the first report interval in this display.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The amount of time in the last cycle (for example, between two presses of the Enter key).</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the last report interval in this display.</td>
</tr>
<tr>
<td>Location Name</td>
<td>The DDF location name of the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>DDF Status</td>
<td>The status of the Distributed Database Facility: ACTIVE or NOT ACTIVE.</td>
</tr>
<tr>
<td>DDF CPU Rate</td>
<td>The CPU rate of the DDF address space. Includes both MVS TCB and SRB time.</td>
</tr>
<tr>
<td>Dist Allied Threads</td>
<td>The number of distributed allied threads that are currently active.</td>
</tr>
<tr>
<td>Active DBATs</td>
<td>The number of current active DB Access threads.</td>
</tr>
<tr>
<td>Inactive DBATs</td>
<td>The number of current inactive DB Access threads. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DDF Send Rate</td>
<td>The rate at which data is being sent by DDF (expressed as the number of kilobytes per second).</td>
</tr>
<tr>
<td>DDF Receive Rate</td>
<td>The rate at which data is being received by DDF (expressed as the number of kilobytes per second).</td>
</tr>
</tbody>
</table>
### Distributed Data Facility Statistics

#### Resync Attempts
The number of resynchronization connects attempted with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.

#### Resync Successes
The number of resynchronization connects that succeeded with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.

#### Cold Start Connections
The number of Cold Start connections with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.

#### Warm Start Connections
The number of Warm Start connections with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.

#### DBATs Queued
Number of times a database access thread had to wait because the maximum number of concurrent DBAT threads (MAXDBAT) was reached.

#### Conversation Dealloc
The number of conversations deallocated because the ZPARM limit for maximum connected remote threads (both active and inactive) was reached. This field appears only for DB2 Version 4 and above.

#### HWM All DBATs
The high water mark of inactive and active data base access threads. This field appears only for DB2 Version 4 and above.

#### HWM Active DBATs
The high water mark of active DB Access threads. If the INACTIVE option is specified, it is possible for this value and the current number of active DBAT threads to exceed MAXDBAT. This occurs because DB2 allows CONNECTs to be processed even if MAXDBAT has been exceeded. After connect processing is complete, if MAXDBAT is still exceeded, then the DBAT is made inactive. This field appears only for DB2 Version 4 and above.

#### Max DB Access (MAXDBAT)
The maximum number of database access threads allowed for the DB2 being monitored (determined by the setting of MAXDBAT in DSNZPARM).

#### HWM Inactive DBATs
The high water mark of inactive DB Access threads. This field appears only for DB2 Version 4 and above.

#### Remote Statistics
The following group of fields occurs for each remote DB2 location with which the local DB2 subsystem has communicated, either as a requester or a responder, since the local DB2 was started.

#### Remote Location Name
The name of a remote location with which the local DB2 has communicated. The statistics immediately below this field pertain to this location.

#### Remote Location Luname
The logical unit name of the location specified in the Remote Location Name field.

#### Conversations Queued
The number of conversations queued by DDF since the local DB2 was started.
Each of the following sent/received fields generates two rows of output; the top row is the sent value, and the bottom row is the received value.

**Binds for Remote Access**
The number of SQL statements bound for remote access.

**Message Buffer Rows**
The number of rows in the message buffer block if block fetch is being used.

**Block Mode Switches**
The number of times a switch was made from continuous block mode to limited block mode.

**Commits/Remote**
The number of commit operations performed with the remote location as coordinator.

**Rollbacks/Remote**
The number of rollback operations performed with the remote location as coordinator.

**Indoubts/Remote**
The number of threads that became indoubt with the remote location as coordinator.

**Tran Sent/Recv**
The number of transactions migrated to and from the remote location since the local DB2 was started.

**SQL Sent/Recv**
The number of SQL calls sent to and from the remote location since the local DB2 was started.

**Row Sent/Recv**
The number of rows sent to and from the remote location since the local DB2 was started.

**Message Sent/Recv**
The number of VTAM messages sent to and from the remote location since the local DB2 was started.

**Byte Sent/Recv**
The number of bytes sent to and from the remote location since the local DB2 was started.

**Commit Sent/Recv**
The number of commits sent to and from the remote location since the local DB2 was started.

**Abort Sent/Recv**
The number of aborts sent to and from the remote location since the local DB2 was started.

**Conv Sent/Recv**
The number of conversations sent to and from the remote location since the local DB2 was started.

**Blocks Sent/Recv**
The number of blocks sent to and from the remote location, if using block mode.

**Prepare Sent/Recv**
The number of prepare requests sent to and received from the participant. Used only for 2-phase commit.

**Last Agent Sent/Recv**
The number of last agent requests sent to and received from the coordinator. Used only for 2-phase commit.

---

2-Phase Commit

Each of the following sent/received fields generates two rows of output; the top row is the sent value, and the bottom row is the received value.

**Prepare Sent/Recv**
The number of prepare requests sent to and received from the participant. Used only for 2-phase commit.

**Last Agent Sent/Recv**
The number of last agent requests sent to and received from the coordinator. Used only for 2-phase commit.
<table>
<thead>
<tr>
<th>Statistic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commit Sent/Recv</td>
<td>The number of committed requests sent to the participant and received from the coordinator. 2-phase commit operations only.</td>
</tr>
<tr>
<td>Backout Sent/Recv</td>
<td>The number of backout requests sent to the participant and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Forget Sent/Recv</td>
<td>The number of forget requests sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Commit Resp Sent/Recv</td>
<td>The number of request commit responses sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Backout Resp Sent/Recv</td>
<td>The number of backout responses sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
</tbody>
</table>
Distributed Data Facility VTAM Summary

The Distributed Data Facility (DDF) VTAM Summary screen provides DDF VTAM-related information, including high-level analysis of active VTAM sessions, active VTAM APPC conversations, and the number of active threads. Information is presented for each remote DB2 location that has a current connection to the local DB2 subsystem being monitored.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAM Luname</td>
<td>The VTAM logical unit name in use by DDF</td>
</tr>
<tr>
<td>VTAM Acbname</td>
<td>The VTAM access control block name for the logical unit in use by DDF.</td>
</tr>
<tr>
<td>VTAM Modetab</td>
<td>The VTAM mode entry table name in use by DDF.</td>
</tr>
<tr>
<td>VTAM Sessions</td>
<td>The number of active VTAM sessions that are currently allocated.</td>
</tr>
<tr>
<td>VTAM Version</td>
<td>The version of VTAM that is in use.</td>
</tr>
<tr>
<td>VTAM Conversations</td>
<td>The number of active VTAM APPC conversations that are currently allocated.</td>
</tr>
<tr>
<td>Remote Location Name</td>
<td>The name of a remote location in which active VTAM sessions exist.</td>
</tr>
<tr>
<td>Remote Luname</td>
<td>The logical unit name for the remote location in this row.</td>
</tr>
<tr>
<td>VTAM Ver</td>
<td>The version of VTAM in use by this remote location.</td>
</tr>
<tr>
<td>VTAM Session</td>
<td>The number of active VTAM sessions between this remote DB2 location and the local DB2.</td>
</tr>
<tr>
<td>DIST Thread</td>
<td>The number of active distributed allied threads with conversations between this remote DB2 location and the local DB2.</td>
</tr>
<tr>
<td>DIST Conv</td>
<td>The number of active conversations that are in use by the distributed allied threads connected to this remote DB2 and the local DB2.</td>
</tr>
<tr>
<td>DBAC Thread</td>
<td>The number of active database access threads with conversations between this remote DB2 and the local DB2.</td>
</tr>
<tr>
<td>DBAC Conv</td>
<td>The number of active conversations that are using the database access threads connected to this remote DB2 and the local DB2.</td>
</tr>
</tbody>
</table>
Distributed Data Facility VTAM Detail

The Distributed Data Facility (DDF) VTAM Detail screen provides a look at DDF activity from a VTAM-session perspective. It displays information about all active VTAM sessions. DIST (distributed allied) and DBAC (database access) conversation types always appear at the top of the display. Output is sorted by elapsed time of threads owning the conversations. If a thread owns multiple conversations, the plan name will be displayed only for the first conversation. The Planname field will be blank for all other conversations owned by the thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- the thread that owns a particular conversation, move the cursor to the desired line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAM Session ID</td>
<td>The VTAM session ID of the active VTAM session.</td>
</tr>
<tr>
<td>Conv Type</td>
<td>The conversation type.</td>
</tr>
<tr>
<td></td>
<td><strong>DBAC</strong> A conversation owned by a database access thread.</td>
</tr>
<tr>
<td></td>
<td><strong>DIST</strong> A conversation owned by a distributed allied thread.</td>
</tr>
<tr>
<td></td>
<td><strong>SYST</strong> A system conversation between two DB2 subsystems.</td>
</tr>
<tr>
<td></td>
<td><strong>AVAL</strong> No conversation on this active VTAM session.</td>
</tr>
<tr>
<td>VTAM Luname</td>
<td>The logical unit name of the remote DB2 location that is the partner logical unit for the active VTAM session.</td>
</tr>
<tr>
<td>Time Since Last Req</td>
<td>The time that has elapsed since the last VTAM APPC request was issued on the active conversation ((hh:mm:ss))</td>
</tr>
</tbody>
</table>
**VTAM Session ID**  The VTAM session ID of the active VTAM session.

**Conv Status**  The status of the conversation.

- **WAIT-VTAM**  The conversation is suspended and waiting for a VTAM response.
- **IN-VTAM**  The conversation is active within VTAM.
- **NOT ACTIVE**  The conversation is inactive (i.e., neither active nor waiting for a VTAM response).

**Planname**  The plan name of the thread that owns the conversation using this VTAM session. If this field is blank for a DIST or DBAC conversation type, the plan name is the same as the one immediately above.

If Conv Type is SYST, this field will be blank because no plan is involved.
Object Analysis

Introduction

The panels described in this chapter help you to evaluate DB2 object allocations, object activity, volume activity, and dataset extend activity. Data for these displays requires that object analysis collection is active. If this collector is not active, no data will display on these panels.

Note: OMEGAMON II provides object analysis data only for active DB2 objects. Data is not available for objects that are not open.

This chapter describes the two panels used to start and stop object analysis collection. See the OMEGAMON II for DB2 Configuration and Customization Guide for information on starting the OMEGAMON II event collection manager/EVENTMGR. EVENTMGR is a prerequisite for starting object analysis collection.

OMEGAMON II provides the object analysis information through a series of 25 screens.

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Object Allocation Summary

The Object Allocation Summary screen displays allocation-related information at the database level. It displays only databases that contain spaces that are currently allocated to the DB2 subsystem being monitored (if a database is stopped it will not appear in the display).

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting
OMEGAMON II does not highlight any fields on this screen.

Navigation
For additional information about

- a particular database, move the cursor to the database line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields
Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Databases</td>
<td>The number of databases that are allocated to the DB2 you are monitoring.</td>
</tr>
<tr>
<td>Total Spaces</td>
<td>The number of spaces that are allocated to the DB2 you are monitoring.</td>
</tr>
<tr>
<td>Total Datasets</td>
<td>The number of datasets that are allocated to the DB2 you are monitoring.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of a database.</td>
</tr>
<tr>
<td>Spaces</td>
<td>The number of spaces owned by the database and currently allocated to DB2.</td>
</tr>
<tr>
<td>Tblsp</td>
<td>The number of spaces that are tablespaces currently allocated to DB2.</td>
</tr>
<tr>
<td>Indxs</td>
<td>The number of spaces that are indexspaces currently allocated to DB2.</td>
</tr>
<tr>
<td>DSNs</td>
<td>The number of datasets that are allocated for the spaces owned by the database.</td>
</tr>
<tr>
<td>Extents</td>
<td>The number of dataset extents allocated by the datasets.</td>
</tr>
<tr>
<td>Exts/DSN</td>
<td>The average number of extents per dataset for the database.</td>
</tr>
<tr>
<td>Max Exts</td>
<td>The largest number of extents per dataset for the database.</td>
</tr>
</tbody>
</table>
Database Allocations

The Database Allocations screen provides allocation information for all spacenames owned by a particular database.

OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular space, move the cursor to the spacename line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>The name of the database that owns the spacenames in the display.</td>
</tr>
<tr>
<td>Total Spaces</td>
<td>The number of spaces in this database.</td>
</tr>
<tr>
<td>Total Datasets</td>
<td>The number of datasets in this database.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of a space that is owned by the database and allocated to DB2.</td>
</tr>
<tr>
<td>Type</td>
<td>The spacename type. Possible values:</td>
</tr>
<tr>
<td></td>
<td>INDEX An index</td>
</tr>
<tr>
<td></td>
<td>PTIX A partitioned index</td>
</tr>
<tr>
<td></td>
<td>PTTS A partitioned tablespace</td>
</tr>
<tr>
<td></td>
<td>SEG M A segmented tablespace</td>
</tr>
<tr>
<td></td>
<td>TBLS A simple tablespace</td>
</tr>
<tr>
<td></td>
<td>UNDT Undetermined. (This can occur if the database DBD is not currently loaded in the EDM pool.)</td>
</tr>
<tr>
<td>BP</td>
<td>The identifier of the buffer pool in use by the spacename.</td>
</tr>
<tr>
<td>Vols</td>
<td>The number of volumes in use by the spacename.</td>
</tr>
<tr>
<td>DSNs</td>
<td>The number of datasets that are allocated for the spacename.</td>
</tr>
<tr>
<td>Exts</td>
<td>The number of dataset extents allocated by the datasets.</td>
</tr>
<tr>
<td>Exts/DSN</td>
<td>The average number of extents per dataset for the spacename.</td>
</tr>
<tr>
<td>Max Exts</td>
<td>The largest number of extents per dataset for the spacename.</td>
</tr>
</tbody>
</table>
Spacename Allocations

Introduction
The Spacename Allocations display provides allocation-related information at the spacename level. It displays only datasets that are currently allocated to DB2 and are owned by the spacename displayed.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular dataset, move the cursor to the DSN line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>The name of the database that owns the spacename.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of the space about which information is displayed.</td>
</tr>
</tbody>
</table>
| Type | The spacename type. Possible values:  
- Simple Tablespace  
- Part(itioned) Tablespace  
- Segm(ented) Tablespace  
- Index  
- Part(itioned) Index  
- Undetermined (for example, if the database DBD is not currently loaded in the EDM pool) |
| Datasets | The number of datasets in use by the spacename. |
| Volumes | The number of volumes in use by the dataset. |
| Exts | The number of dataset extents allocated by all the datasets in use by the spacename. |
| Space | The total amount of space allocated by the spacename. |
| DSN | The sequence number of the dataset. |
| Vols | The number of volumes that the dataset resides on. |
### Spacename Allocations

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exts</td>
<td>The number of extents allocated by the dataset.</td>
</tr>
<tr>
<td>High Fmt Pg</td>
<td>The highest page number formatted in the dataset. This value is displayed in hexadecimal.</td>
</tr>
<tr>
<td>High Alloc Pg</td>
<td>The highest page number allocated in the dataset. This value is displayed in hexadecimal.</td>
</tr>
<tr>
<td>% In Use</td>
<td>The percentage of pages in use for the dataset. This value is computed by dividing High Fmt Pg by High Alloc Pg.</td>
</tr>
<tr>
<td>Dataset Space</td>
<td>The total amount of space allocated by the dataset. This value is expressed in tracks.</td>
</tr>
</tbody>
</table>
The Dataset Allocations screen provides allocation information for a single DB2 dataset. This display helps you evaluate dataset size, dataset extents, and dataset placement.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Database**: The name of the database that owns the space.
- **Spacename**: The name of the space that owns the dataset.
- **Type**: The spacename type. Possible values:
  - Simple Tablespace
  - Part(itioned) Tablespace
  - Segm(ented) Tablespace
  - Index
  - Part(itioned) Index
- **Dataset**: The sequence number of the selected dataset.
- **Volumes**: The number of volumes in use by the dataset.
- **Exts**: The number of dataset extents allocated by the dataset.
- **Space**: The total amount of space currently allocated by the dataset.
- **Extent**: The sequence number of the extent.
- **Volume**: The volume in which the extent is allocated.
- **Low CCHH**: The beginning cylinder and head address on the volume where the extent is located.
- **High CCHH**: The ending cylinder and head address on the volume where the extent is located.
- **Low Page**: The beginning page number contained in the extent. This value is displayed in hexadecimal.
High Page  The ending page number contained in the extent. This value is displayed in hexadecimal.

Extent Space  The amount of space allocated by the extent. This value is expressed in tracks.
Object Activity Summary

The Object Activity Summary screen allows high-level analysis of getpage and I/O activity from a DB2 database perspective.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular database, move the cursor to the database line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Time</td>
<td>The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.</td>
</tr>
<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Total Getpage</td>
<td>The total number of getpage requests since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Total I/O</td>
<td>The total number of I/O requests since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of a database that has incurred getpage or I/O activity.</td>
</tr>
<tr>
<td>% of Getp</td>
<td>The percentage of total getpage activity that is applicable to the database.</td>
</tr>
<tr>
<td>% of I/O</td>
<td>The percentage of total I/O activity that is applicable to the database.</td>
</tr>
<tr>
<td>Getp per RIO</td>
<td>The getpage to read I/O ratio for the database. This ratio is computed by dividing Getpage by Sync Read + Pre Fetch.</td>
</tr>
<tr>
<td>Getpage</td>
<td>The number of getpage requests for the database.</td>
</tr>
<tr>
<td>Sync Read</td>
<td>The number of synchronous reads for the database.</td>
</tr>
<tr>
<td>Pre Fetch</td>
<td>The number of prefetch read I/Os for the database.</td>
</tr>
<tr>
<td>Async Write</td>
<td>The number of asynchronous writes for the database.</td>
</tr>
<tr>
<td>Other Write</td>
<td>The number of immediate and format writes for the database.</td>
</tr>
</tbody>
</table>
Database Activity

The Database Activity screen formats getpage and I/O activity for spaces owned by a single database. It displays information about spaces that have incurred getpage or I/O activity during the current collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular space, move the cursor to the spacename line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Time</td>
<td>The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.</td>
</tr>
<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Total Getpage</td>
<td>The total number of getpage requests since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the database that owns the spacenames in the display.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of a space that has incurred getpage/I/O activity.</td>
</tr>
<tr>
<td>% of Getp</td>
<td>The percentage of total getpage activity that is applicable to the spacename.</td>
</tr>
<tr>
<td>% of I/O</td>
<td>The percentage of total I/O activity that is applicable to the spacename.</td>
</tr>
<tr>
<td>Getp per RIO</td>
<td>The getpage to read I/O ratio for the spacename. This ratio is computed by dividing Getpage by Sync Read + Pre Fetch.</td>
</tr>
<tr>
<td>Getpage</td>
<td>The number of getpage requests for the spacename.</td>
</tr>
<tr>
<td>Sync Read</td>
<td>The number of synchronous reads for the spacename.</td>
</tr>
<tr>
<td>Pre Fetch</td>
<td>The number of prefetch read I/Os for the spacename.</td>
</tr>
<tr>
<td></td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Async Write</strong></td>
<td>The number of asynchronous writes for the spacename.</td>
</tr>
<tr>
<td><strong>Other Write</strong></td>
<td>The number of immediate and format writes for the spacename.</td>
</tr>
</tbody>
</table>
Thread Activity by Database

The Thread Activity by Database screen allows you to analyze which threads are generating I/O activity for a selected DB2 database. It displays information for each thread that generated I/O activity to the database during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Interval Time**: The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.
- **Interval Elapsed**: The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.
- **Total Getpage**: The total number of getpage requests since the beginning of the collection interval.
- **Total I/O**: The total number of I/O requests since the beginning of the collection interval.
- **Database**: The name of the selected database for which thread activity has occurred.
- **Planname**: The name of the plan associated with the thread.
- **Authid**: The authid associated with the thread.
- **Correlation**: The correlation ID associated with the thread.
- **Getpage**: The number of getpage requests made by the thread.
- **Sync Read**: The number synchronous reads made by the thread.
- **Sequential Prefetch**: The number of sequential prefetch read I/Os made by the thread.
- **List Prefetch**: The number of list prefetch read I/Os made by the thread.
Spacename Activity

The Spacename Activity screen formats getpage and I/O activity for a single spacename. It displays information about datasets that have incurred getpage/IO activity during the current collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Time</td>
<td>The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.</td>
</tr>
<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Total Getpage</td>
<td>The total number of getpage requests since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Total I/O</td>
<td>The total number of I/O requests since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the database that owns the spacename (and datasets) in the display.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of the space that contains the dataset(s) in the display.</td>
</tr>
<tr>
<td>DSN</td>
<td>The sequence number of a dataset that incurred I/O activity.</td>
</tr>
<tr>
<td>% of Getp</td>
<td>The percentage of total getpage activity that is applicable to the spacename.</td>
</tr>
<tr>
<td>% of I/O</td>
<td>The percentage of total I/O activity that is applicable to the spacename.</td>
</tr>
<tr>
<td>Getp per RIO</td>
<td>The getpage to read I/O ratio for the spacename. This ratio is computed by dividing Getpage by Sync Read + Pre Fetch.</td>
</tr>
<tr>
<td>Getpage</td>
<td>The number of getpage requests for the spacename.</td>
</tr>
<tr>
<td>Sync Read</td>
<td>The number of synchronous reads for the spacename.</td>
</tr>
<tr>
<td>Pre Fetch</td>
<td>The number of prefetch read I/Os for the spacename.</td>
</tr>
</tbody>
</table>
### Spacename Activity

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Async Write</strong></td>
<td>The number of asynchronous writes for the spacename.</td>
</tr>
<tr>
<td><strong>Other Write</strong></td>
<td>The number of immediate and format writes for the spacename.</td>
</tr>
</tbody>
</table>
Thread Activity by Spacename

The Thread Activity by Spacename screen allows you to analyze which threads are generating I/O activity for a selected spacename. It displays information for each thread that generated I/O activity to the spacename during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Interval Time**: The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.
- **Interval Elapsed**: The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.
- **Total Getpage**: The total number of getpage requests since the beginning of the collection interval.
- **Total I/O**: The total number of I/O requests since the beginning of the collection interval.
- **Database**: The name of the selected database for which thread activity has occurred.
- **Spacename**: The name of the selected spacename for which thread activity has occurred.
- **Planname**: The name of the plan associated with the thread.
- **Authid**: The authid associated with the thread.
- **Correlation**: The correlation ID associated with the thread.
- **Getpage**: The number of getpage requests made by the thread.
- **Sync Read**: The number of synchronous reads made by the thread.
- **Sequential Prefetch**: The number of sequential prefetch read I/Os made by the thread.
- **List Prefetch**: The number of list prefetch read I/Os made by the thread.
Volume Activity Summary

The Volume Activity Summary screen allows you to observe the performance of volumes that contain DB2 objects in order to evaluate DASD performance by volume. The display is limited to volumes that contain DB2 objects that are currently allocated and available for use by the DB2 being monitored.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular volume, move the cursor to the volume line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Time</td>
<td>The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.</td>
</tr>
<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Volume</td>
<td>The name of a volume that contains DB2 objects.</td>
</tr>
<tr>
<td>Unit</td>
<td>The address of the volume.</td>
</tr>
<tr>
<td>Vol Util%</td>
<td>The volume utilization percentage. This value represents the percentage of time the volume is actually in use.</td>
</tr>
<tr>
<td>Vol Serv</td>
<td>The average service time for the volume since the beginning of the collection interval. This field is the sum of the average IOS pending time, the average IOS connect time, and the average IOS disconnect time for the volume. It does not include IOS queue time.</td>
</tr>
<tr>
<td>Total I/O</td>
<td>The total number of I/Os for this volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value might not reflect all I/O activity to the volume.</td>
</tr>
<tr>
<td>DB2 I/O</td>
<td>The total number of I/Os (for this volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>% DB2 I/O</td>
<td>The percentage of total DB2 I/O that is attributable to the volume. This value is derived by dividing the volume DB2 I/O count by the total DB2 I/O count.</td>
</tr>
<tr>
<td>Alloc DSNs</td>
<td>The number of physical DB2 datasets currently allocated as a result of the DB2 spaces residing on the volume.</td>
</tr>
<tr>
<td>Alloc Exts</td>
<td>The number of dataset extents currently allocated as a result of the DB2 datasets residing on the volume.</td>
</tr>
<tr>
<td>Exts/DSN</td>
<td>The average number of allocated extents per allocated dataset on the volume.</td>
</tr>
</tbody>
</table>
Volume Database Activity

The Volume Database Activity screen allows you to analyze I/O activity for a single volume from a DB2 database perspective. A line of output is generated for each database that has incurred I/O to the volume during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular database, move the cursor to the database line and press the zoom key (PF11).
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Time</td>
<td>The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.</td>
</tr>
<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.</td>
</tr>
<tr>
<td>Device Type</td>
<td>The device type of the volume displayed.</td>
</tr>
<tr>
<td>DB2 I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of a database that contains one or more objects residing on the volume.</td>
</tr>
<tr>
<td>DSNs</td>
<td>The number of datasets that have incurred I/O to the volume since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Exts</td>
<td>The number of allocated extents that have incurred I/O to the volume since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Vol Use%</strong></td>
<td>The percentage of DB2 I/O activity to the volume that is attributable to the database. This ratio is computed by dividing the total I/O rate for the database by the total DB2 I/O rate to the volume.</td>
</tr>
<tr>
<td><strong>Total I/O Rate</strong></td>
<td>The total I/O rate (per second) that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td><strong>Read I/O Rate</strong></td>
<td>The read I/O rate (per second) that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td><strong>Write I/O Rate</strong></td>
<td>The write I/O rate (per second) that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td><strong>Total I/O Count</strong></td>
<td>The total I/O count that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td><strong>Read I/O Count</strong></td>
<td>The number of reads that are attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td><strong>Write I/O Count</strong></td>
<td>The number of writes that are attributable to the database for the time elapsed.</td>
</tr>
</tbody>
</table>
Volume Service

The Volume Service screen allows you to perform detailed service time analysis for a single DASD volume. It provides a breakdown of volume service time by the various IOS service-time components.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

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<table>
<thead>
<tr>
<th>Field</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Interval Elapsed</td>
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</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.</td>
</tr>
<tr>
<td>Device Type</td>
<td>The device type of the volume displayed.</td>
</tr>
<tr>
<td>DB2 I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Vol Serv</td>
<td>The average service time for the volume since the beginning of the collection interval. This field is the sum of the average IOS pending time, the average IOS connect time, and the average IOS disconnect time for the volume. It does not include IOS queue time.</td>
</tr>
<tr>
<td>Pending</td>
<td>The average IOS pending time for the volume. This is a subset of total volume service time.</td>
</tr>
<tr>
<td>Connect</td>
<td>The average IOS connect time for the volume. This is a subset of total volume service time.</td>
</tr>
<tr>
<td>Disconnect</td>
<td>The average IOS disconnect time for the volume. This is a subset of total volume service time.</td>
</tr>
</tbody>
</table>
Thread Activity by Volume

The Thread Activity by Volume screen helps you determine which DB2 threads are generating I/O to a selected volume. It displays information for each thread that generated I/O activity to the volume during the collection interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

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<td>Interval Elapsed</td>
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</tr>
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<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.</td>
</tr>
<tr>
<td>Device Type</td>
<td>The device type of the volume displayed.</td>
</tr>
<tr>
<td>DB2 I/O Rate/Sec</td>
<td>The total number of I/Os per second (for the volume) that originated from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Plannname</td>
<td>The name of the plan associated with the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The authid associated with the thread.</td>
</tr>
<tr>
<td>Correlation</td>
<td>The correlation ID associated with the thread.</td>
</tr>
<tr>
<td>Total I/O Rate</td>
<td>The total I/O rate (per second) that is attributable to the volume for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>The read I/O rate (per second) that is attributable to the volume for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Rate</td>
<td>The write I/O rate (per second) that is attributable to the volume for the time elapsed.</td>
</tr>
<tr>
<td>Total I/O Count</td>
<td>The total I/O count that is attributable to the volume for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Count</td>
<td>The read I/O count that is attributable to the volume for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Count</td>
<td>The write I/O count that is attributable to the volume for the time elapsed.</td>
</tr>
</tbody>
</table>
Volume Spacename Activity

The Volume Spacename Activity screen allows you to analyze I/O activity for a single volume from a DB2 database/spacename perspective. It displays information for each spacename (owned by the database) that incurred I/O activity to the volume during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular spacename, move the cursor to the spacename line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen.

Fields

Here are descriptions for some of the fields displayed on this screen.

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<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.</td>
</tr>
<tr>
<td>Device Type</td>
<td>The device type of the volume displayed.</td>
</tr>
<tr>
<td>DB2 I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the selected database.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of a space that has incurred I/O activity since the beginning of the collection interval.</td>
</tr>
<tr>
<td>DSNs</td>
<td>The number of datasets that have incurred I/O to the volume since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Exts</td>
<td>The number of allocated extents that have incurred I/O activity since the beginning of the collection interval.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Vol Use %</td>
<td>The percentage of DB2 I/O activity to the volume that is attributable to the spacename. This ratio is computed by dividing the total I/O rate for the database/spacename by the total database I/O rate to the volume.</td>
</tr>
<tr>
<td>Total I/O Rate</td>
<td>The total I/O rate (per second) that is attributable to the space for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>The read I/O rate (per second) that is attributable to the space for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Rate</td>
<td>The write I/O rate (per second) that is attributable to the space for the time elapsed.</td>
</tr>
<tr>
<td>Total I/O Count</td>
<td>The total I/O count that is attributable to the space for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Count</td>
<td>The number of reads that are attributable to the space for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Count</td>
<td>The number of writes that are attributable to the space for the time elapsed.</td>
</tr>
</tbody>
</table>
Volume Thread Activity by Database

The Volume Thread Activity by Database screen allows you to analyze which threads are generating I/O activity for a single volume from a DB2 database perspective. It displays information for each thread that generated I/O activity to the database during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

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<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.</td>
</tr>
<tr>
<td>Device Type</td>
<td>The device type of the volume displayed.</td>
</tr>
<tr>
<td>DB2 I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the database for which thread activity has occurred.</td>
</tr>
<tr>
<td>Planname</td>
<td>The name of the plan associated with the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The authid associated with the thread.</td>
</tr>
<tr>
<td>Correlation</td>
<td>The correlation ID associated with the thread.</td>
</tr>
<tr>
<td>Total I/O Rate</td>
<td>The total I/O rate (per second) that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>The read I/O rate (per second) that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Rate</td>
<td>The write I/O rate (per second) that is attributable to the database for the time elapsed.</td>
</tr>
</tbody>
</table>
Volume Thread Activity by Database

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total I/O Count</td>
<td>The total I/O count that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Count</td>
<td>The read I/O count that is attributable to the database for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Count</td>
<td>The write I/O count that is attributable to the database for the time elapsed.</td>
</tr>
</tbody>
</table>
Volume Dataset Activity

The Volume Dataset Activity screen allows you to analyze I/O activity for a single volume from a DB2 database/spacename perspective. It displays information for each dataset (owned by the database/spacename) that incurred I/O activity to the volume during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular dataset, move the cursor to the DSN line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

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</tr>
<tr>
<td>Interval Elapsed</td>
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</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.</td>
</tr>
<tr>
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</tr>
<tr>
<td>DB2 I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the selected database.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of the selected space.</td>
</tr>
<tr>
<td>DSN</td>
<td>The number of a dataset that incurred I/O activity.</td>
</tr>
<tr>
<td>Exts</td>
<td>The number of allocated extents that have incurred I/O activity since the beginning of the collection interval.</td>
</tr>
</tbody>
</table>
**Vol Use %**  
The percentage of DB2 I/O activity to the volume that is attributable to the spacename. This ratio is computed by dividing the total I/O rate for the database/spacename by the total spacename I/O rate to the volume.

**Total I/O Rate**  
The total I/O rate (per second) that is attributable to the space for the time elapsed.

**Read I/O Rate**  
The read I/O rate (per second) that is attributable to the space for the time elapsed.

**Write I/O Rate**  
The write I/O rate (per second) that is attributable to the space for the time elapsed.

**Total I/O Count**  
The total I/O count that is attributable to the space for the time elapsed.

**Read I/O Count**  
The number of reads that are attributable to the space for the time elapsed.

**Write I/O Count**  
The number of writes that are attributable to the space for the time elapsed.
Volume Thread Activity by Spacename

The Volume Thread Activity by Spacename screen allows you to analyze which threads are generating I/O activity for a single volume from a DB2 spacename perspective. It displays information for each thread that generated I/O activity to the spacename during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Interval Time**: The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.
- **Interval Elapsed**: The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.
- **Volume/Unit**: The name and address of the volume.
- **Total I/O Rate/sec**: The total number of I/Os per second for the volume. This value is from an MVS perspective. If the volume is shared by multiple MVS systems, this value may not reflect all I/O activity to the volume.
- **Device Type**: The device type of the volume displayed.
- **DB2 I/O Rate/sec**: The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.
- **Database**: The name of the database for which thread activity has occurred.
- **Spacename**: The name of the space for which thread activity has occurred.
- **Planname**: The name of the plan associated with the thread.
- **Authid**: The authid associated with the thread.
- **Correlation**: The correlation ID associated with the thread.
- **Total I/O Rate**: The total I/O rate (per second) that is attributable to the spacename for the time elapsed.
- **Read I/O Rate**: The read I/O rate (per second) that is attributable to the spacename for the time elapsed.
**Write I/O Rate**  The write I/O rate (per second) that is attributable to the spacename for the time elapsed.

**Total I/O Count**  The total I/O count that is attributable to the spacename for the time elapsed.

**Read I/O Count**  The read I/O count that is attributable to the spacename for the time elapsed.

**Write I/O Count**  The write I/O count that is attributable to the spacename for the time elapsed.
Volume Dataset/Extent Activity

The Volume Dataset/Extent Activity screen allows you to analyze I/O activity for a single volume from a DB2 database spacename/dataset perspective. It displays information for each extent (owned by the database spacename/dataset) that incurred I/O activity to the volume during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about:
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

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<td>Interval Elapsed</td>
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</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
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<td>DB2 I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the selected database.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of the selected space.</td>
</tr>
<tr>
<td>DSN</td>
<td>The sequence number of the selected dataset.</td>
</tr>
<tr>
<td>Extent</td>
<td>The number of an extent that incurred I/O activity.</td>
</tr>
</tbody>
</table>
Each of the following fields includes two values for each extent. The values appear one over the other; for example, the Read I/O Rate appears above the Read I/O Count.

**Low Page/CCHH**

The starting page number (top line) and cylinder/head address (bottom line) of the extent.

**High Page/CCHH**

The ending page number (top line) and cylinder/head address (bottom line) of the extent.

**Total I/O Rates/Counts**

The total I/O rate per second (top line) and count (bottom line) that is attributable to the extent for the time elapsed.

**Read I/O Rates/Counts**

The read I/O rate per second (top line) and count (bottom line) that is attributable to the extent for the time elapsed.

**Write I/O Rates/Counts**

The write I/O rate per second (top line) and count (bottom line) that is attributable to the extent for the time elapsed.
Volume Thread Activity by Dataset

The Volume Thread Activity by Dataset screen allows you to analyze which threads are generating I/O activity for a single volume from a DB2 dataset perspective. It displays information for each thread that generated I/O activity to the dataset during the collection interval.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

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<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Time</td>
<td>The collection interval currently in use by the object analysis collector. At the end of this time interval, the collector resets its collection statistics.</td>
</tr>
<tr>
<td>Interval Elapsed</td>
<td>The amount of time that has elapsed within the current collection interval. It is the period of time for which the displayed information is applicable.</td>
</tr>
<tr>
<td>Volume/Unit</td>
<td>The name and address of the volume.</td>
</tr>
<tr>
<td>Total I/O Rate/sec</td>
<td>The total number of I/Os per second (for the volume) originating from the DB2 subsystem being monitored. This is a subset of total I/Os per second if I/O to the volume is also occurring from address spaces other than the DB2 subsystem being monitored.</td>
</tr>
<tr>
<td>Device Type</td>
<td>The device type of the volume displayed.</td>
</tr>
<tr>
<td>Database</td>
<td>The name of the database for which thread activity has occurred.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of the space for which thread activity has occurred.</td>
</tr>
<tr>
<td>DSN</td>
<td>The name of the dataset for which thread activity has occurred.</td>
</tr>
<tr>
<td>Planname</td>
<td>The name of the plan associated with the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The authid associated with the thread.</td>
</tr>
<tr>
<td>Correlation</td>
<td>The correlation ID associated with the thread.</td>
</tr>
<tr>
<td>Total I/O Rate</td>
<td>The total I/O rate (per second) that is attributable to the dataset for the time elapsed.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>The read I/O rate (per second) that is attributable to the dataset for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Rate</td>
<td>The write I/O rate (per second) that is attributable to the dataset for the time elapsed.</td>
</tr>
<tr>
<td>Total I/O Count</td>
<td>The total I/O count that is attributable to the dataset for the time elapsed.</td>
</tr>
<tr>
<td>Read I/O Count</td>
<td>The read I/O count that is attributable to the dataset for the time elapsed.</td>
</tr>
<tr>
<td>Write I/O Count</td>
<td>The write I/O count that is attributable to the dataset for the time elapsed.</td>
</tr>
</tbody>
</table>
Dataset Extend Activity

The Dataset Extend Activity screen allows you to analyze dataset extent activity. It displays information for each database/spacename/dataset that has acquired additional extents since object analysis collection was started.

If you move the cursor to any entry in a column and press PF10, OMEGAMON II will sort on that column.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options on the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>The name of a database that owns the space that incurred extend activity.</td>
</tr>
<tr>
<td>Spacename</td>
<td>The name of a space that incurred extend activity.</td>
</tr>
<tr>
<td>DSN</td>
<td>The relative number of a dataset that incurred extend activity.</td>
</tr>
<tr>
<td>Extents</td>
<td>The number of dataset extents allocated since object analysis collection was started.</td>
</tr>
</tbody>
</table>
Object Summary Display Options

The Object Summary Display Options screen allows you to select filtering criteria for the output displayed on the Object Activity Summary and Object Allocation Summary screens.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**DATABASE=**

Type a database name (maximum 8 characters) if you want to limit the displayed information to a particular database or group of databases.

You can specify a wildcard by typing a question mark (?), or you can use an asterisk (*) for generic filtering. For example, DSNDB* would select all databases that begin with DSNDB, and DSN??06 would select all databases that begin with DSN, end with 06, and have any two characters in between.

**EXTSDSN>**

If you want to display object allocation information that applies only to databases with more than \( n \) extents per dataset, enter a number between 0 and 123.

**MAXEXTS>**

If you want to display object allocation information that applies only to databases with datasets containing more than \( n \) total extents, enter a number between 0 and 123.

**PERCGETP>**

If you want to display object activity information that applies only to databases with a percentage of total getpages that is greater than \( n \), enter a number between 0 and 100.

**PERCIO>**

If you want to display object activity information that applies only to databases with a percentage of total I/O that is greater than \( n \), enter a number between 0 and 100.

**RATE=**

If you want to display object activity information as rates rather than counts, enter YES. The default is NO. Rates are calculated dividing each count field by the interval elapsed time.
Database Display Options

The Database Display Options screen allows you to select filtering criteria for the output displayed on the Database Allocations and Database Activity screens.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**SPACENAM=**

Enter a spacename (maximum 8 characters) if you want to limit the displayed information to a particular space or group of spaces. You can specify a wildcard by entering a question mark (?), or you can use an asterisk (*) for generic filtering. For example, DSN* would select all databases that begin with DSN, and DSN??010 would select all databases that begin with DSN, end with 010, and have any two characters in between.

**BPID=**

If you want to display database allocation and activity information that applies only to a particular buffer pool, enter the buffer pool ID (0, 1, 2, or 32).

**EXTSDSN>**

If you want to display database allocation information that applies only to spaces with more than \( n \) extents per dataset, enter a number between 0 and 123.

**MAXEXTS>**

If you want to display object allocation information that applies only to spaces with more than \( n \) total extents per dataset, enter a number between 0 and 123.

**TYPE=**

If you want to limit the displayed information to a particular object type, enter one of the following values:

- **INDX** An index
- **PTIX** A partitioned index
- **PTTS** A partitioned tablespace
- **SEGM** A segmented tablespace
- **TBLS** A simple tablespace

**PERCGETP>**

If you want to display database activity information that applies only to spaces with a percentage of total getpage that is greater than \( n \), enter a number between 0 and 100.
If you want to display database activity information that applies only to spaces with a percentage of total I/O that is greater than \( n \), enter a number between 0 and 100.

If you want to display database activity information as rates rather than counts, enter YES. The default is NO. Rates are calculated dividing each count field by the interval elapsed time.
Volume Activity Display Options

The Volume Activity Display Options screen allows you to select filtering criteria for the output displayed on the Volume Activity Summary screen.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOLUME=</td>
<td>Enter a volume name (maximum 6 characters) if you want to limit the displayed information to a particular volume or group of volumes. You can specify a wildcard by entering a question mark (?), or you can use an asterisk (<em>) for generic filtering. For example, VOL</em> would select all volumes that begin with VOL, and VOL??2 would select all volumes that begin with VOL, end with 2, and have any two characters in between.</td>
</tr>
<tr>
<td>UNIT=</td>
<td>If you want to display only volume activity information that applies to a particular volume address or group of addresses, enter a value (maximum 4 characters). You can specify a wildcard by entering a question mark (?), or you can use an asterisk (*) for generic filtering.</td>
</tr>
<tr>
<td>VOLUTIL&gt;</td>
<td>If you want to display only volume activity information where the volume utilization is greater than n percent, enter a number between 0 and 100.</td>
</tr>
<tr>
<td>VOLSERV&gt;</td>
<td>If you want to display only volume activity information where the average volume service time is greater than n, enter a number between 0 and 1000.</td>
</tr>
<tr>
<td>TOTALIO&gt;</td>
<td>If you want to display only volume activity information where the volume's total I/O rate per second is greater than n, enter a number between 0 and 999.</td>
</tr>
<tr>
<td>DB2IO&gt;</td>
<td>If you want to display only volume activity information where the volume's DB2 I/O rate per second is greater than n, enter a number between 0 and 999.</td>
</tr>
<tr>
<td>DB2PERC&gt;</td>
<td>If you want to display only volume activity information where the percentage of total DB2 I/O attributable to the volume is greater than n percent, enter a number between 0 and 100.</td>
</tr>
<tr>
<td>RATE=</td>
<td>If you want to display volume activity information as rates rather than counts, enter YES. The default is NO. Rates are calculated dividing each count field by the interval elapsed time.</td>
</tr>
</tbody>
</table>
Start Object Analysis Collection

The Start Object Analysis Collection screen allows you to start the object analysis collector for the DB2 you are monitoring. This collector gathers data that is displayed on the object analysis screens.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional options, use the OMEGAMON II PF keys.

Fields

OMEGAMON II does not display any fields on the Start Object Analysis Collection screen.
Stop Object Analysis Collection

The Stop Object Analysis Collection screen allows you to stop the object analysis collector for the DB2 you are monitoring.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional options, use the OMEGAMON II PF keys.

Fields

OMEGAMON II does not display any fields on the Stop Object Analysis Collection screen.
Address Space Information

Introduction

OMEGAMON II provides information about DB2 address spaces and access to OMEGAMON II commands through a series of screens.

Chapter Contents

Address Space Information and OMEGAMON II Commands Menu ........................................ 348
Virtual Storage Map ................................................................................................................ 349
Allocated DDnames and Datasets .................................................................................... 350
Job Information and Start Time ....................................................................................... 351
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Address Space Information and OMEGAMON II Commands Menu

The Address Space Information and OMEGAMON II Commands Menu provides navigation options to more detailed information about DB2 address spaces. It also provides a navigation path to a screen where you can issue OMEGAMON II commands.

Highlighting

OMEGAMON II does not highlight any fields on this menu.

Navigation

For additional information about:

- related topics, choose one of the options from the menu.
- other topics, use the OMEGAMON II PF keys.

Fields

The Address Space Information and OMEGAMON II Commands Menu does not display any output fields. It displays navigation options to other screens that display information about address spaces or allow you to issue OMEGAMON II commands.

Note: The region names (for example, $DB2MSTR) that appear in the figure above are samples. Your actual region names will appear on your screen. If the Distributed Data Facility is not active, N/A will appear next to the letter D.
Virtual Storage Map

The Virtual Storage Map screen displays the amount of virtual storage currently in use and the amount available for use in the specified address space.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about:

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Because this screen uses additional overhead to collect its data, use of this screen requires special authorization. To display this data, first type `/PWD` on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$DB2MSTR</td>
<td>The name of the job running in this address space. (In this case, $DB2MSTR.)</td>
</tr>
<tr>
<td>ASID collected at</td>
<td>The time at which OMEGAMON II collected the information for this virtual storage map.</td>
</tr>
<tr>
<td>System Area (extended)</td>
<td>The size of the system area in the extended private area.</td>
</tr>
<tr>
<td>Available (extended)</td>
<td>The amount of extended private area available for use. The boundary between the extended private area available for the user and the extended private area for the system is labelled Extended User Area Limit on the map.</td>
</tr>
<tr>
<td>User area (extended)</td>
<td>The size of the user area in the extended private area.</td>
</tr>
<tr>
<td>System Area (private)</td>
<td>The size of the system area in the private area.</td>
</tr>
<tr>
<td>Available (private)</td>
<td>The amount of private area available for use. The boundary between the private area available for the user and the private area for the system is labelled User Area Limit on the map.</td>
</tr>
<tr>
<td>User area (private)</td>
<td>The size of the user area in the private area.</td>
</tr>
</tbody>
</table>
Allocated DDnames and Datasets

The Allocated DDnames and Datasets screen displays all ddnames allocated to a jobstep and their corresponding device addresses, dataset names, and volume serial numbers (including dynamically allocated ddnames) for the specified address space.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Because this screen uses additional overhead to collect its data, this screen requires special authorization. To display this data, first type `/PWD` on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

Here are descriptions for some of the fields displayed on this screen.

- `$DB2MSTR` The name of the job running in this address space. (In this case, `$DB2MSTR`.)
- `ASID` The address space identification number.
- `collected at` The time at which OMEGAMON II collected the information for this address space.
- `DDname` The ddnames allocated to this job. If the `DDname` field is blank, the dataset is part of a concatenation with preceding datasets.
- `Adr` The addresses of the devices allocated to this job.
- `VolSer` The volume serial numbers of the devices allocated to this job.
- `Sta,Dsp` The status and disposition of the devices allocated to this job.
- `DSname` The names of the datasets allocated to this job.

You can type a 2- or 3-digit number after DDNS (DDNSnn or DDNnnn) to suppress the display of the first `nn` or `nnn` lines of output. This ability is useful if all of the ddnames do not fit on one screen.

If you type an `X` before DDNS (XDDNS), OMEGAMON II displays the following additional information about the ddname: LRECL, BLKSZ, RECFM, ORG, password protection, number of EXCPs for each dataset, and TIOT address for each TCB group. No additional SRBs are scheduled to display this information. OMEGAMON II collected all of the data when you selected this screen but only displays it when you type the `X`. 
Job Information and Start Time

The Job Information and Start Time screen displays miscellaneous information about the specified address space.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Because this screen uses additional overhead to collect its data, this screen requires special authorization. To display this data, first type /PWD on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

Fields

Here are descriptions for some of the fields displayed on this screen.

$DB2MSTR
The name of the job running in this address space. (In this case, $DB2MSTR.)

ASID
The address space identification number.

collected at
The time at which OMEGAMON II collected the information for this address space.

Job started at
The time and date on which this job started executing.

MSGCLASS
The system message class associated with the job.
The Jobpack Area Modules screen displays information about the modules currently loaded into the user’s jobpack area for the specified address space.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Because this screen uses additional overhead to collect its data, this screen requires special authorization. To display this data, first type `/PWD` on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$DB2MSTR</td>
<td>The name of the job running in this address space. (In this case, $DB2MSTR.)</td>
</tr>
<tr>
<td>ASID</td>
<td>The address space identification number.</td>
</tr>
<tr>
<td>collected at</td>
<td>The time at which OMEGAMON II collected the information about these modules.</td>
</tr>
<tr>
<td>Module</td>
<td>The module names allocated to this address space</td>
</tr>
<tr>
<td>Entry</td>
<td>The entry points of the modules allocated to this user.</td>
</tr>
<tr>
<td>Length</td>
<td>The length of the modules allocated to this user.</td>
</tr>
<tr>
<td>Users</td>
<td>The number of users currently using this module.</td>
</tr>
<tr>
<td>Attributes</td>
<td>The attributes associated with this module. (For the definition of the attributes, see the IBM MVS Linkage Editor Manual.)</td>
</tr>
</tbody>
</table>

You can type a 2- or 3-digit number after MODS (MODSnn or MODnnn) to suppress the display of the first `nn` or `nnn` lines of output. This ability is useful if all of the module names do not fit on one screen.
Region and Program Information

The Region and Program Information screen displays information available from the private area.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen. Because this screen uses additional overhead to collect its data, this screen requires special authorization. To display this data, first type /PWD on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

- **$DB2MSTR**: The name of the job running in this address space. (In this case, $DB2MSTR.)
- **ASID**: The address space identification number.
- **collected at**: The time at which OMEGAMON II collected the information for this address space.
- **Job Step Pgm**: The name of the job step program currently executing.
- **TCBs**: The number of TCBs currently attached.
- **Datasets**: The number of datasets currently in use.
- **Modules**: The number of modules currently in use.
- **Step started at now in step # n of m**: The time the current step started executing. The number of the current step and the total number of steps in the job.
- **Total private region**: The total size of the private area, including areas that cannot be allocated.
- **Unused**: The amount of the total private area not currently in use.

Each of the following fields appears twice: once to describe the region below the 16 megabyte line and once to describe the region above that line.
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region requested</td>
<td>The amount specified on the REGION JCL parameter.</td>
</tr>
<tr>
<td>Region limit</td>
<td>The region limit that the IEALIMIT exit imposes.</td>
</tr>
<tr>
<td>Low PVT in use</td>
<td>The storage that the REGION parameter limits. This includes all of the user subpools.</td>
</tr>
<tr>
<td>Unallocated</td>
<td>The storage not allocated to subpools.</td>
</tr>
<tr>
<td>Free</td>
<td>The storage allocated to subpools but not currently GETMAINed.</td>
</tr>
<tr>
<td>High PVT in use</td>
<td>Includes LSQA, SWA, and subpools 229 and 230. This value is allocated from the top of the user’s region downward and is not limited by the REGION JCL parameter.</td>
</tr>
<tr>
<td>Start of SYSREG</td>
<td>The beginning address of the area of storage reserved for use by the region control task.</td>
</tr>
<tr>
<td>End of SYSREG</td>
<td>The ending address of the area of storage reserved for use by the region control task.</td>
</tr>
<tr>
<td>Start of low PVT</td>
<td>The beginning address of the storage that the REGION parameter limits.</td>
</tr>
<tr>
<td>End of low PVT</td>
<td>The ending address of the storage that the REGION parameter limits.</td>
</tr>
<tr>
<td>Current top</td>
<td>The highest allocated address in the low PVT area at the current time</td>
</tr>
<tr>
<td>Limit of region</td>
<td>The ending address of the low PVT area.</td>
</tr>
<tr>
<td>Start of high PVT</td>
<td>The beginning address of the high PVT area.</td>
</tr>
<tr>
<td>End of high PVT</td>
<td>The ending address of the high PVT area.</td>
</tr>
</tbody>
</table>
Storage Allocated by Subpool

The Storage Allocated by Subpool screen displays information about current virtual storage allocations for each storage subpool for the specified address space.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

Fields

Because this screen uses additional overhead to collect its data, this screen requires special authorization. To display this data, first type /PWD on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

Here are descriptions for some of the fields displayed on this screen.

Subpool Information

$DB2MSTR The name of the job running in this address space.

ASID The address space identification number.

collected at The time at which OMEGAMON II collected the information for these modules.

Sbp-K Subpool number and protect key (decimal). Subpools appear for the jobstep TCB and below.

Alloc Amount of virtual storage currently allocated to the subpool (in 4K increments).

Real Amount of real storage supporting the virtual allocation.

#Blks Number of allocated blocks.

Addr The address of the first block allocated.

Free Number of free bytes (hex) within the allocation.

#Blks Number of free blocks.

Mxfreee Size (hex) of the largest free block within the subpool.

Program Program name of the TCB associated with these subpools.

Own|Shr Status of the subpool, owned or shared.
You can type a 2-digit number after SUBP (SUBPnn) to suppress the display of the first nn lines of output. This ability is useful if all of the subpool names do not fit on one screen.

If you want to display subpools for all TCBs within the address space type an x before SUBP (XSUBP).

Task Private Area Summary

- **PVT-Lo**: Task private storage below the 16M line.
- **PVT-Hi**: Task private storage above the line.
- **Subtot**: Summary of private storage above and below the line.

Address Space Private Area Summary

- **Tot-Lo**: Total private area allocated below the line for all tasks in the address space.
- **Tot-Hi**: Total private area allocated above the line for all tasks in the address space.
- **Totals**: Total private area allocated for all tasks in the address space, both above and below the line.
Task Control Block Structure

The Task Control Block Structure screen displays the current TCB structure for the target user (the DB2 system services address space, DB2 database services address space, DB2 IRLM address space, or the DDF address space).

**Highlighting**
OMEGAMON II does not highlight any fields on this screen.

**Navigation**
For additional information about related topics, choose one of the options at the top of the screen. For other topics, use the OMEGAMON II PF keys.

**Fields**
Because this screen uses additional overhead to collect its data, this screen requires special authorization. To display this data, first type `/PWD` on the top line of the screen. OMEGAMON II will prompt you to enter a password to verify your authorization. After you enter a valid password, press Enter and OMEGAMON II will display its data.

Here are descriptions for some of the fields displayed on this screen.

- **$DB2MSTR**: The name of the job running in this address space. (In this case, `$DB2MSTR`.)
- **ASID**: The address space identification number.
- **collected at**: The time at which OMEGAMON II collected the information for this TCB structure.
- **Program**: Load module name of the most recently created request block (RB) for each TCB.
- **Mother**: The program name of the mother TCB of the program TCB.
- **Daughter**: The program name of the daughter TCB of the program TCB.
- **Sister**: The program name of the oldest sister TCB of the program TCB.
- **Jobstep**: The name of the current job step.
Figure 1 shows a graphic representation of the information about a typical TCB structure shown on the DB2 Address Space TCB Structure screen.

If you type an A before TCBS (ATCBS), OMEGAMON II displays the actual TCB address under each TCB program name. This information may be useful if several TCBs in the same step invoke the same program. If you type an X before TCBS (XTCBS), OMEGAMON II displays two extra lines for each TCB. The first line shows the storage protect key for the TCB and indicates whether the address space is APF authorized. The second line indicates that the TCB is either DISPATCHABLE or NON-DISPATCHABLE. For those TCBs that cannot be dispatched, a short explanation appears to indicate which non-dispatchability bit was set.

You can type a 2-digit number after TCBS (TCBSnn) to suppress the display of the first nn lines of output. This ability is useful if all of the TCB names do not fit on one screen.
Introduction
This chapter provides information about OMEGAMON commands.

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OMEGAMON Commands Screen .................................... 360
OMEGAMON Commands Screen

The OMEGAMON Commands screen allows you to issue various OMEGAMON session and maintenance commands that are not on the OMEGAMON II product screens.

Highlighting

The OMEGAMON Commands screen does not highlight any fields.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

The fields on the OMEGAMON Commands screen vary according to the command issued. To issue a command that begins with a slash (/), type the command on the top line of the screen and press Enter. To issue a command that begins with a period (.) or any letter, type the command on any line of the general display area (any line below the prompt) and press Enter. The commands you can issue are described below in alphabetical order.
...**bb**

Clears the screen from the command down to the end of the logical screen (b indicates a blank).

**====**

Draws a separator line across the screen.

The format is:

```
c====aa
```

This command repeats the characters aa across the screen. You can use any 2 characters as a separator line.

On the 3279 color terminal with extended color on, the optional label c specifies the color of the separator line with the first letter of the color name. It can be: (R)ed, (B)lue, (G)reen, (W)hite, (T)urquoise, (Y)ellow, or (P)ink.

For example, the following command creates a line of red pluses across the screen preceded by 4 equal signs.

```
R====++
```

The line will look like this:

```
===================================
```

**/ATTN**

Emulates the PA1 (program attention) key. /ATTN clears the screen, resets your password to zero, returns to default basic color settings, and turns off extended color.

**/AUP**

Enables (/AUP ON) or disables (/AUP OFF) automatic update mode. /AUP applies in VTAM mode only. Automatic update mode is similar to running OMEGAMON II in dedicated mode, since the screen updates at regular intervals without pressing Enter. .AUP performs the same functions.

**Important**

Some network programs do not support automatic update mode (for example, a program that emulates a terminal for your OMEGAMON II VTAM mode session).

**.AUP**

Enables (.AUPON) or disables (.AUPOFF) automatic update mode. If you type .AUP (without ON or OFF), OMEGAMON II displays the current automatic update mode status. .AUP applies in VTAM mode only. Automatic update mode is similar to running OMEGAMON II in dedicated mode, since the screen updates at regular intervals without pressing Enter. /AUP performs the same functions.

**Important**

Some network programs do not support automatic update mode (for example, a program that emulates a terminal for your OMEGAMON II for VTAM mode session).
Scrolls to the bottom of the logical screen.

**/BOTTOM**

Allocate/open (.CN OP) a secondary console, deallocate/close (.CN CL) a secondary console, swap master/secondary consoles (.CN SW), or set the address of the secondary console (.CNxxx).

In dedicated mode, you can set up a secondary OMEGAMON II console to be used for output only. The secondary console will echo everything that appears on the primary console, but accepts no commands or input of any kind.

The secondary console must be the same terminal type as the primary console.

**/D**

Scrolls down the amount specified by its argument (/D cccc)

/D is an alias for /DOWN. See the description of the /DOWN command for information about the command arguments.

**.D**

Deletes nn lines (.Dbnn) on the physical screen.

This command deletes lines beginning with the current line.

**/DCL**

Deletes all comment lines on the screen.

If you want to delete only those comment lines below a certain point on the screen, use the equivalent immediate command instead.

**.DCL**

Deletes all comment lines below its entry line.

If you want to delete all comment lines on the screen, use the equivalent INFO-line command instead. Unlike most other immediate commands, .DCL disappears after it executes.

**.DDb**

Deletes a block of data.

To delete a block of data from the physical screen, enter .DD on the first line of the block and .DD on the last line.

For example, the following command deletes 4 lines. The first blank line and the succeeding 3 lines are deleted and removed from the screen.

```
.DDb
  DISK  SYSB24  TSO0021  SYSB21  MVSA21
  DSKB  MVSA21  PROD05  SYSA24
  .DDb 150  334  D8B
```
**DDEV**

Displays DASD device statistics for all or specified volumes.

*Note:* *RMF must be active to use this command, since the data displayed is from RMF.*

You must use the DDEV minor commands to specify the criteria under which the device statistics will be displayed.

**PDSK**

Displays statistics for devices whose names meet a specified pattern. Type **PDSK** on a separate line after **DDEV**. You can use PDSK to display statistics for the following:

- All devices using **PDSK** and an asterisk (*).
  
  **Example:**
  
  DDEV
  PDSK*

- A specific device using **PDSK** and a volume name. (volser).
  
  **Example:**
  
  DDEV
  PDSK OMON22

- A group of devices using **PDSK** and part of a volume name followed by the asterisk wildcard character (*).
  
  **Example:**
  
  DDEV
  PDSK OMON*
XDSK

Displays statistics for devices that exceed a threshold that you specify. To specify thresholds, enter one or more of the following XDSK minor commands either before you type DDEV or between DDEV and XDSK:

- **AVQ**<i>nnn</i> Specifies average IOS queue depth. Average length > <i>nn.n</i>.
- **RSP**<i>nnn</i> Specifies average total response time > <i>nnn</i> milliseconds.
- **IOS**<i>nnn</i> Specifies average device queue time > <i>nnn</i> milliseconds.
- **CON**<i>nnn</i> Specifies average device connect time > <i>nnn</i> milliseconds.
- **DSC**<i>nnn</i> Specifies average device disconnect time > <i>nnn</i> milliseconds.
- **DUT**<i>nnn</i> Specifies average device utilization > <i>nnn</i> %.
- **PND**<i>nnn</i> Specifies average device request pending time > <i>nnn</i> milliseconds.

**Example:**
The following command displays statistics for devices whose utilization is greater than 30%.

```
DDEV
DUT 30
XDSK
```
**Sample Output:**
The following example shows the fields displayed by the DDEV command (with either PDSK or XDSK). If you enter DDEV without a minor command, only the first line of output is displayed.

<table>
<thead>
<tr>
<th>Volser</th>
<th>I/O per second</th>
<th>Util%</th>
<th>Avg.Q</th>
<th>Resp = IOSQ + Pend + Conn</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDSK OMON*</td>
<td>0.1</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>148 OMON27</td>
<td>12.5</td>
<td>.3</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>151 OMON28</td>
<td>23.0</td>
<td>.2</td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>

**Interval Start Time**
The start time of the RMF interval during which these statistics are being collected.

**Elapsed**
The number of minutes and seconds elapsed since the beginning of this RMF interval.

**Length**
The length of this RMF interval in minutes and seconds.

The first column contains the device address in hexadecimal notation (for example, 14B).

- **Volser**: Volume name.
- **I/O per second**: I/O rate for this device.
- **Util %**: Device utilization percentage.
- **Avg Q**: Average I/O queue depth.
- **Resp**: Average total device response time in milliseconds.
- **IOSQ**: Average I/O queue time in milliseconds.
- **Pend**: Average pending time in milliseconds.
- **Conn**: Average connect time in milliseconds.
- **Disc**: Average disconnect time in milliseconds.
OMEGAMON Commands Screen

/DEF

Sets definition mode (/DEF cccc).

ON

Allows you to define a screen space which includes commands that comment themselves out or otherwise change form after execution. /DEF ON inhibits automatic updating of a dedicated or VTAM mode session. Once you set definition mode with /DEF ON, it remains in effect until you issue /DEF OFF, or save or replace the screen space.

HOLD

Same as ON argument, but definition mode remains in effect after you save a screen space. It is only cancelled when you issue /DEF OFF. Use this option when you want to save two or more screens in a row without reactivating definition mode each time.

OFF

Restores normal screen updating (cancels the effect of /DEF ON or /DEF HOLD).

DELT

Deletes a screen space from main storage or the user’s screen space library (RKO2PCSV). It does not delete from the Candle-supplied screen space library (RKO2PROC).

The format is:

DELTc aaaaaaaaa

**c**

One of the following arguments that specifies the location of the screen space. Enter it in column 6:

- **I** Deletes from main storage (in-storage) only.
- **D** Deletes from RKO2PCSV only.
- **B or b** Deletes from both main storage and RKO2PCSV (default).

**aaaaaaa**

The screen space name you want to delete. Specify the name starting in column 8.

**Note:** OMEGAMON II does not substitute special characters for the DELT command. You must enter the real member name.

For example, the following command deletes screen space SAMPLE from main storage.

DELT SAMPLE
OMEGAMON Commands Screen

/DOWN

Scrolls down the amount of lines specified by argument cccc.

/DOWN works only if the number of logical rows (LROWS) is defined to a number greater than the number of physical rows on this terminal. This definition can be changed with the LROWS startup parameter.

The format is:

/DOWN cccc

where cccc is one of the following:

- **nnn**: Scrolls **nnn** lines (from 1 - 999).
- **BOT**: Scrolls to the last logical row.
- **CSR**: Scrolls according to the current location of the cursor. If the cursor is on the INFO-line, the scroll amount is a page.
- **MAX**: Scrolls down the number of LROWS defined for your terminal.
- **PAGE**: Scrolls down so that the current cursor position is at the bottom of the physical screen. This is the default.

For example, the following command scrolls the display 24 lines (one screen and one line on a 3278 model 2 terminal).

/COMP 24

If you assign the /DOWN command to a PF key (the default is PF20), you can type any of the optional arguments on the INFO-line before you press the PF key. OMEGAMON II will interpret the entry as if you had typed the command plus the argument.

/D is an alias for /DOWN.

.DSA

Sets and displays authorization to list and/or zap non-shareable data-only spaces. The .DSA command provides a mechanism to limit the scope of the listing and zapping commands to data-only spaces that have been defined by the owner as shareable by other address spaces.

Command operands:

- **ON**: Turns on data-only space authorization; i.e., access is allowed to all data-only spaces.
- **OFF**: Turns off data-only space authorization; i.e., access is restricted to shareable spaces only.

Entering .DSA with no operand displays the current status of data-only space authorization.

.EXP

Displays the expiration date after which OMEGAMON II will not function. Product updates contain new features, support for new IBM releases, enhanced operations, and maintenance. It is in your best interest to reinstall the product each time it is updated to keep current with enhancements and updates.

See the OMEGAMON II for DB2 Configuration and Customization Guide for more information about the OMEGAMON II expiration date.
The .FGO (Fast GO) command is used when creating screen spaces to fetch the next screen space of a series. It allows screen spaces to be chained together and to execute very quickly, bypassing the screen display and the OMEGAMON II cyclical wait.

.FGO has a conditional screen fetch feature that fetches a screen space only if a condition is true.

Command operands:

- `ccccccc` specifies the name of a screen space.
- `CPSER` compares the CPU serial number.
- `MODE` compares the 3-character OMEGAMON II mode ID as displayed on the INFO-line (for example, DED, VTS, VTM).
- `OPSYS` compares the 3-character ID for the operating system level (NSE, SE2, SP3, XA1).
- `SMFID` compares the 4-character SMF ID.
- `UNIT` compares the terminal address of the primary OMEGAMON II console (only in dedicated mode).
- `USER` compares the suffix of the user profile.
- `&VAR` allows you to set any comparison you want. The keyword and argument can be any variable name set with the .VAR command or any OMEGAMON II-defined variable.
- `=` keyword equals argument. The equal sign can be entered without blanks on either side of it.
- `EQ` keyword equals argument. Same as equal sign (=).
- `GE` keyword is greater than or equal to argument.
- `GT` keyword is greater than argument.
- `LE` keyword is less than or equal to argument.
- `LT` keyword is less than argument.
- `NE` keyword is not equal to argument.
- `argument` The argument is a 1- to 8-character value to which OMEGAMON II compares the keyword.
Example:
To fetch screen space SAMPLE only if the terminal address 05E1, enter:

```
.FGO SAMPLE UNIT=05E1
```

or

```
.FGO SAMPLE UNIT EQ 05E1
```

To protect against the possibility of a looping condition caused by the .FGO command, OMEGAMON II limits the number of consecutive fetches allowed (64 by default). After the limit is reached, .FGO acts like .SGO (Screen Go) so that executing screen spaces will display on each cycle. Therefore, if there was a loop caused by .FGO screen spaces, you will need to correct the condition and re-enable .FGO with the FGOLOOP keyword of the .SET command.

Because FGLOOP=ON causes .FGO not to bypass the OMEGAMON II cycle and the terminal display, you may want to turn it on yourself to test your screen space fetch routines.

If multiple .FGO commands appear on one screen, the last one that is executable takes precedence.

See also the .SGO command.

GDFN

Defines an exception group for exception analysis.

You can use GDFN to define a group to which exceptions can be assigned, to add exceptions to an existing group, to delete exceptions from a specific group, and to delete an entire group.

**Note:** An exception can be associated with only one group at a time. You can delete an exception from one group and reassign it to another group.
The format is:

```
GDFN GROUP=cc, NAME='cc..cc', LIST=cc,aa,
DELETE=EXCEPTION, DELETE=GROUP,POSITION=nn
```

**GROUP=cc**  
The 2-character exception group ID. For an existing group, use this keyword to display only the entries for that group.

**NAME='cc..cc'**  
A 25-character user-defined description of the exception group. Enclose in single quotes if there are blanks, special characters, or single quotes in the name.

**LIST=cc,aa**  
Identifies the exceptions to be added to or deleted from the specified exception group.

**DELETE=EXCEPTION**  
Causes the deletion of the exceptions specified with LIST= from the group specified by GROUP=.

**POSITION=nn**  
Specifies the order of the display.

**/H**  
Describes the HELP facilities.  
/H is an alias for /HELP

**/HELP**  
Describes the HELP facilities.  
The help screen space tells you how to find out more about the functions, features, and operation of OMEGAMON II.

**Note:** This command works with or without a slash (/).

**/HOLD**  
Controls the execution of OMEGAMON II commands.  
/HOLD ON suspends command execution until you enter /HOLD OFF  
/HOLD OFF returns to normal OMEGAMON II command execution.  
The /HOLD command is designed for users of VM/PASSTHRU. If you are not a user of VM/PASSTHRU, /HOLD functions the same as placing the cursor in column 1, row 1.

**.I**  
Inserts nn blank lines (.Ibbnn) on the screen.

**.ILC**  
Displays INFO-line commands or their help text.  
The format is:

```
.ILC /cccccc
```

The variable /cccccc is an INFO-line command name. (The slash is optional.) To display all of the INFO-line commands and their aliases, enter the .ILC command without a command name.

To display help text for a specific INFO-line command, enter .ILC followed by the command.
.LOG Controls the OMEGAMON II REPORT log:

.LOGOUT Prints the current log and leaves it open. The command comments itself out to prevent the log from automatically resetting again on the next cycle.

.LOGPUSH Saves the status of the log (i.e., ON or OFF), so that this status can be restored when you execute .LOGPOP. This capability allows you to manipulate the log’s status in screen spaces invoked by .FGO or .SGO, then return it to its original state after these screen routines are complete. One of the following messages will appear on the same line as the command.

>> Log inactive. Status saved. <<

or

>> Log active. Status saved. <<

.LOGPOP Restores the log to the status in effect when you executed the last .LOGPUSH. One of the following messages will appear on the same line as the command.

>> Log status restored to inactive. <<

or

>> Log status restored to active. <<

If you enter .LOG without an argument, OMEGAMON II displays the current status of the log.

/LOG is the equivalent INFO-line command; however, it does not offer the PUSH and POP arguments.

/LOGOUT Sends the current OMEGAMON II REPORT log to the printer.

/O is an alias for /LOG with the OUT argument.

OMEGAMON II dynamically allocates REPORT to a SYSOUT equals A file with FREE equals CLOSE. This means that every time you enter the /LOGOUT command, the REPORT log is automatically spun off.

.LOG performs the same functions as /LOG, and additionally offers the PUSH and POP arguments.
**LSCR**

Loads screen space members from the screen space library to main storage. You can make screen spaces more available and more easily fetched by loading them into main storage with LSCR. For example, if a disk is not available, you can continue to invoke the screen spaces that you loaded into main storage with LSCR.

The format is:

```
  LSCR  cccccccc  cccccccc  ...  cccccccc
```

The variables `ccccccc` are screen space names. Specify screen space member names starting in column 8. You can load as many members as can fit on the input line.

For example, in the next command, OMEGAMON II attempts to load screen spaces ZZ1, ZZ2, and ZZ3 from the O2PROC dataset to main storage.

```
  LSCR  ZZ1 ZZ2 ZZ3
```

If OMEGAMON II could not find screen space ZZ1, it would display the following messages:

```
+    OB1507 Member not found - ZZ1
+    OB1508 2 members loaded
```

**MCHN**

Scans common storage.

Because this command uses additional overhead to collect its data, this command requires special authorization. Before OMEGAMON II will display this data, you must enter a valid password using the `/PWD` command.

MCHN scans the elements of a table for a string of hex or character values. If the scan is successful, OMEGAMON II displays the table element that contains the string.

MCHN searches the address space in which OMEGAMON II resides. Use this command primarily to examine the MVS common area. Use XMCH to search other address spaces.
The format is:

```
MCHNc addr,string,olen,chain,dlen
```

- **c**: The format of the output:
  - **B or b**: hex and character (default)
  - **C**: character only
  - **X**: hex only

- **addr**: The address of the first table element that OMEGAMON II scans.
- **string**: The hex string OMEGAMON II uses for the scan. If you enclose it in single quotes, OMEGAMON II assumes it is a character string. **Note**: OMEGAMON II interprets 2 single quotes (' ') within a character string as a single quote ( ' ).
- **olen**: The offset (in hex bytes) to the string in the table element; the comparison starts at this point. You may precede `olen` by a plus sign (+) or a minus sign (-).
- **chain**: The offset (in hex bytes) to the chain pointer (the location in the table element that contains the address of the next table element). You may precede `chain` by a plus sign (+) or minus sign (-).
- **dlen**: The number of bytes (1 to 8 hex digits) that OMEGAMON II displays if the scan is successful. The display starts at the beginning of the string. The default is 16 (X ' 10 ') bytes.

You must make sure that `addr` is the starting point of a table element. The address at `addr + chain` points to the next table element. The scan ends when the value at `addr + chain` is one of the following:

- 0
- -1
- `addr` (the table is a ring)

You can specify, modify, or pre-define an address (`addr`) for a storage display or modification command. An address consists of an anchor, optional modifiers, and an optional pre-defined name.
An anchor is the base address of an address specification. It can be:

**absolute**  A hexadecimal number:

- **370**  1 to 6 digits
- **XA/ESA**  1 to 8 digits

**symbolic**  1- to 8-alphanumeric characters, including @, #, and $.

You can supply one or more modifiers to change the location that the anchor points to. A modifier can be:

**offset**  A plus sign (+) or minus sign (-), followed by a hexadecimal number:

- **370**  1 to 6 digits
- **XA/ESA**  1 to 8 digits

This modifier specifies a location at a known offset (positive or negative) from the anchor address.

**indirect**  One of the following symbols:

- %  for 24-bit (370) addressing
- ?  for 31-bit (XA/ESA) addressing

This modifier indicates that the location pointed to is itself an address.

You can use these modifiers to create very powerful and versatile address expressions. For example, the following address expression locates the TIOT of the currently executing MVS task:

```
10%%+4%+C%
```
10%  Treats the data at location X'10' as a 24-bit address. This is the address of the MVS CVT.

%  This second % treats the data at the start of the CVT as a 24-bit address. The first word of the CVT contains the address of a double word (8 bytes). The double word contains:
   - the address of the next TCB to dispatch (bytes 0 to 3)
   - the address of the currently dispatched TCB (bytes 4 to 7)

+4%  Adds X'04' to the address of the double word, and then treats the data at the displacement as a 24-bit address. This is the address of the currently dispatched TCB.

+0C%  Adds X'0C' to the address of the TCB, and then treats the data at the displacement as a 24-bit address. This is the address of the TIOT.

You can specify or reference an address by a name consisting of 1- to 8-alphanumeric characters, including @, #, and $. The following command specifies address names.

The example below shows a typical MCHN command. In this example, MCHN scans a table that starts at location AAB6C8 and looks for the string D6C30199 that begins at the eighth byte of the table element; the address of the next table element is in the fourth word. By default, this command displays 16 bytes of the table element in hex and character notation.

```
MCHN AAB6C8,D6C30199,8,4
```

The following output appears if the scan is successful:

```
Addr=007DA000
0000  E2E2C3E3 00000000 D6C30199 00000000 *

MCHN AAB6C8,D6C30199,8,4
```

+ 0000  E2E2C3E3 00000000 D6C30199 00000000 *SSCT   OC r

*
MLST
Displays bytes of memory from commonly addressable storage.

Because this command uses additional overhead to collect its data, this command requires special authorization. Before OMEGAMON II will display this data, you must enter a valid password using the /PWD command.

MLST displays the contents of commonly addressable storage such as the
- common storage area (CSA)
- system queue area (SQA)
- nucleus

The format is:

```
MLSTc addr,dlen
```

- **c** The format of the output:
  - B or b hex and character (default)
  - C character only
  - X hex only

- **addr** The first address of storage that OMEGAMON II displays.
  (For more information about how to specify an address, see the MCHN command.)

- **dlen** The number (1 to 8 hex digits) of bytes that OMEGAMON II displays. The default is 16 (X'10') bytes.

The following examples show uses of the MLST command.

MLST lists 32 (X'20') bytes starting at address 1EB0 in character format:

```
MLST 1EB0,20
```

Typical output is:

```
MLST 1EB0,20                                      Addr= 00001EB0
+000   *........h.....       167........*
```

MLST lists 16 (X'10') bytes starting at address FF32D6 in both hex and character formats:

```
MLST FF32C1+15,10                               Addr= 00FF32D6
+000  20280010 A18800F9 82F000FF 20400000   *....*h.9b0... ..*
```

.MOD
Shows OMEGAMON II module names and addresses.

The optional suffix A (.MODA) lists the module names in alphabetical order.

This command provides debugging information, including module names and start addresses. If OMEGAMON II encounters a program check, this information is useful to Candle Customer Support.
MSCN

Displays the location in storage of a specific string.

Because this command uses additional overhead to collect its data, this
command requires special authorization. Before OMEGAMON II will
display this data, you must enter a valid password using the /PWD
command.

MSCN scans the common area and the address space in which
OMEGAMON II resides for a string of hex or character values. If the scan is
successful, OMEGAMON II displays the string. To scan the DB2 private
area, use the XMSC command.

The format is:

\textbf{MSCN}\textsubscript{c} \texttt{addr,string,slen}\textsubscript{dlen}

\begin{itemize}
  \item \texttt{c} \hspace{1cm} The format of the output:
    \begin{itemize}
      \item \texttt{B or b} \hspace{1cm} Hex and character (default)
      \item \texttt{C} \hspace{1cm} Character only
      \item \texttt{X} \hspace{1cm} Hex only
    \end{itemize}
  \item \texttt{addr} \hspace{1cm} The first address of storage that OMEGAMON II scans.
    \hspace{1cm} (For more information about how to specify an address,
    see the MCHN command.)
  \item \texttt{string} \hspace{1cm} The hex string OMEGAMON II uses for the scan. If you
    enclose it in single quotes, OMEGAMON II assumes it is a
    character string.\hspace{1cm} \textbf{Note}: OMEGAMON II interprets 2 single quotes (` `)
    within a character string as a single quote (` `).
  \item \texttt{slen} \hspace{1cm} The number (1 to 8 hex digits) of bytes that
    OMEGAMON II scans. The default is 256 (X'100') bytes.
  \item \texttt{dlen} \hspace{1cm} The number (1 to 8 hex digits) of bytes that
    OMEGAMON II displays if the scan is successful. The
    display starts at the beginning of string. The default is 16
    (X'10') bytes.
\end{itemize}

In the next example, MSCN scans the first 1000 bytes of the TIOT entry for
the character string O2HELP and displays 14 hex bytes starting at that
point. The display is in both hex and character formats.

\textbf{MSCN 10\%\%+4\%+C\%,'O2HELP',1000,14}

Typical output is:

\begin{verbatim}
MSCN 10\%\%+4\%+C\%,'O2HELP',1000,14 \hspace{1cm} Addr=0061701C
+ 0000  D6C3C8C5 D3D74040 60BCA000 80001B00 *O2HELP
   .......
+ 0010  14010100                      *....    *
\end{verbatim}
**MZAP**  
Modifies the contents of the common area or the OMEGAMON II private area.

Because this command can perform potentially dangerous functions, this command requires special authorization. Before OMEGAMON II will execute this command, you must enter a valid password using the `/PWD` command.

<table>
<thead>
<tr>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>MZAP is very powerful. Use it with extreme care.</td>
</tr>
</tbody>
</table>

MZAP modifies the contents of commonly addressable storage such as the:
- common storage area (CSA)
- system queue area (SQA)
- nucleus

Note the following:
- Some commonly addressable storage requires no authorization or special key to modify; however, some areas are store-protected. To modify these areas you must supply the action character in the label field of the MZAP command.
- If you use MZAP to modify storage in the Pageable Link Pack Area (PLPA), MZAP automatically does a long-term page-fix to ensure that the storage remains modified. If the pagefix is necessary, OMEGAMON II displays the message:

  **PAGE(S) FIXED**

- With 370, MZAP cannot zap the PLPA of a processor that has PLPA protection.
The format is:

```
 aMZAP addr,ver,rep
```

- **addr**: The address of the string OMEGAMON II may modify. (For more information about how to specify an address, see the MCHN command.)
- **ver**: The verify string; OMEGAMON II modifies storage only if it finds this string at `addr`.
- **rep**: The replacement string. If OMEGAMON II finds `ver` at `addr`, `rep` replaces `ver`. The strings `ver` and `rep` must be the same length.

In the first example, MZAP changes a fullword at location 6764 from X’0A’ to X’64’.

```
MZAP 6744+20,0000000A,00000064
```

In the next example, MZAP changes an X’FF’ to X’00 at location EA65C0.

```
MZAP EA65C0,FF,00
```

/O

Prints the existing OMEGAMON II REPORT log without closing the log. The /O command is an alias for /LOG with the OUT argument. See the description of the /LOG command for complete information about the /O command.

OSPC

Lists the attributes of the owner of a data-only space. The format is:

```
OSPC spacename
```

where `spacename` is the name of the data-only space you want to list. If you do not enter a name, OSPC will list all data spaces and hiperspaces. You can also enter 1 to 7 characters, and OSPC will display any space names that begin with the specified character string.

OSPC displays the following information about the specified space: type of space, ASID of the owning TCB, jobname of the owning TCB, address of the owning TCB.

/P

Prints the current logical screen. The /P command is an alias for /PRINT. See the description of the /PRINT command for complete information about this command.
.PCS Displays OMEGAMON II program check statistics.

These statistics are used for debugging information. If OMEGAMON II takes a program check, this information is useful to Candle Customer Support.

.PFK Displays/resets PF key definitions.

The format is:

```
c.PFK nn=aaaaaaaa/*bbb...bbb
```

(blank) Without operands, .PFK displays all current PF key settings. PF keys without assignments do not appear on the screen.

Label E for redefining several PF keys at once.

PF key number.

Screen space name (1 to 8 characters) or INFO-line command (/*cccccc).

Comment of up to 32 characters (bbb...), following the slash and asterisk (/*).

You can define up to 99 physical and logical PF keys.

The PF keys that you define with .PFK are in effect only for that OMEGAMON II session. At startup, OMEGAMON II executes the screen space @ZPFKDEF, which contains default PF key assignments. To make these assignments permanent, change them in the @ZPFKDEF screen space.

For example, the following command sets PF15 to issue the /STOP INFO-line command for this session.

```
.PFK 15=/STOP /* Stops OMEGAMON II
```

Type comment text following a slash and asterisk (/*): Use the same format to assign screen space names to PF keys. For example, the following command sets PF26 to call the screen space DISKS for this session.

```
.PFK 26=DISKS /* DASD information
```

To delete a definition, enter a single underscore (_) for the definition. For example, the following command deletes the definition for PF18.

```
.PFK 18=_
```

You can redefine several PF keys at once without having to type the .PFK command for each one. To do so, use the following procedure.
1. **Type E.PFK.**

OMEGAMON II provides an extended display of all current PF key assignments, and inserts .PFK before each key number, as shown below.

```
+PFK07=/UP      /* SCROLL UP
+PFK08=/DOWN    /* SCROLL DOWN
   ...
+PFK11=/ZOOM    /* ZOOMING FEATURE
```

2. **For each new assignment, blank out the plus sign (+) in front of each .PFK and type the new assignment following the equal sign.**

3. **Press Enter.**

The assignments remain in effect for the duration of the session.

If you want to call screen spaces with PF keys, you must allocate an O2PROC library. To call a screen space assigned to a PF key, press the associated PF key or type its number on the INFO-line.

/PRINT

Prints the current logical screen.

When the screen prints, a >LOGGED< message appears on the INFO-line.

/P is an alias for /PRINT.

.PRIM

Displays current values of the OMEGAMON II startup command parameters.

This command displays applicable OMEGAMON II startup parameters in the following order.

- **IOMODE=cc**  The current OMEGAMON II I/O mode. This is the 2-character code entered as the mode in the startup parameters.
- **SYS=cccc**   The current OMEGAMON II system ID. This is the same system ID that appears on the INFO-line.
- **USER=cc**    The user profile identifier. This is the same identifier that appears on the INFO-line.
- **ROWS=nn**    The number of rows on the physical terminal.
- **LROWS=nnn**  The number of logical rows for the output area.
- **COLS=nnn**   The number of columns on the physical terminal.
- **UNIT=ccc**   The terminal address of a dedicated OMEGAMON II session.
.PRT  Prints the specified portion of the screen to the report file.
The format is:

. PRTc

Without an argument, .PRT prints a screen image from the INFO-line to the
line that contains the .PRT command. After the partial screen prints, .PRT
changes to a comment.

The optional argument H (.PRTH) prevents the .PRT command from
commenting itself out so that it logs these lines continually.

/PWD  Specifies an OMEGAMON II password or reauthorizes a session.
The format is:

/PWD userid

You can use the /PWD command in three ways. They are:

1. To authorize your session for internal security.

   Enter the /PWD command on the INFO-line. The system prompts you
   for a password.

   /PWD____________ < You enter >
   ______________ Enter Password < Result >

   The password does not appear on the screen as you type it. It remains
   in effect until you reset it.

2. To reset the security level to 0 after your authorized session.

   Type /PWD on the INFO-line as in the example, but instead of entering
   a password, just press Enter. Authorization is cleared.

3. The /PWD command can be entered with your user ID to do the
   following:
   - Log onto an existing OMEGAMON II session and reauthorize external
     security to your level for the session.
   - In dedicated mode, gain access to external security.

   When you use the /PWD command with your user ID to log onto an
   existing session, you cannot update your password.

See the OMEGAMON II for DB2 Configuration and Customization Guide,
for details about the OMEGAMON II security features.
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OMEGAMON Commands Screen

REN M

Renames a screen in RKO2PCSV or main storage.

RENM renames screen spaces only in main storage (in-storage) and RKO2PCSV. It does not rename Candle-supplied screen spaces in the library pointed to by the ddname O2PROC.

The new format is:

\texttt{RENMc aaaaaaaa bbbbbbbb}

\textbf{c} \hspace{1em} Specifies the location of the renamed screen space.

\textbf{aaaaaaa} \hspace{1em} The old name of the screen space.

\textbf{bbbbbbbb} \hspace{1em} The new name of the screen space.

\textbf{Note:} OMEGAMON II does not substitute special characters for the RENM command. You must enter the actual member name.

\textbf{/REP}

Replaces the existing saved screen space of the same name.

Use /REP in place of /SAVE if you want to replace an existing saved screen space in the user-defined screen space library pointed to by ddname RKO2PCSV.

The format is:

\texttt{/REP cccccccc,a}

\textbf{cccccccc} \hspace{1em} Specifies the screen space name (1 to 8 characters).

\textbf{a} \hspace{1em} One of three arguments that may follow the screen space name. The argument is separated from the screen space name with a comma (,).

\textbf{B} \hspace{1em} Replaces in both main storage and RKO2PCSV.

\textbf{D} \hspace{1em} Replaces in RKO2PCSV only.

\textbf{I} \hspace{1em} Replaces in main storage (in-storage) only.

The default is wherever OMEGAMON II finds the screen space.

OMEGAMON II substitutes a D for a dot (.) in screen names.

The size of the screen space is the number of lines to the last non-blank line in the screen space.
The following example replaces the current screen space SAMPLE with the currently-entered screen space in both main storage and RKO2PCSV.

/REP SAMPLE,B

The default cursor position is the first position of the INFO-line. However, if you want to save the cursor in any position on the screen, type /REP on the INFO-line but do not press Enter. Move the cursor to the desired position and then press Enter to execute /REP. The cursor will display in that position whenever OMEGAMON II invokes the screen.

If you want to look at or edit a screen using a text editor, be aware of the following:

- CURS=(n,m) appears at the top-left corner of the INFO-line to indicate the cursor position in the saved screen.
- The variable n specifies the cursor row position, and m specifies the column position.
- You can add or change the cursor position in a saved screen using a text editor by adding or changing CURS=(n,m)

**Note:** /R is not an alias for /REP. It is an alias for /RETURN. /REP does not have an alias.

/RESHOW
Displays a new copy of the current screen.

.RTN
Terminates an ASF or TSF sequence and returns to the calling screen space.

The .RTN command is required at the bottom of the last screen space in an automatic screen facility (ASF) or timed screen facility (TSF) sequence. It returns to the calling screen space and re-enables exception analysis for further automatic calls. You can turn on ASF using the Exception Logging screen (page 436) or the screen that sets analysis options for individual exceptions (page 423).
The format is:

n.RTNcc aaaaaaaa

- **n**: The optional label \( n \) specifies the number of cycles to delay the return to the calling screen space. The value of \( n \) can be the numbers 1 to 9 or the letters A to Z (representing 10 to 35). Each time the screen updates, \( n \) decrements by 1. When \( n=0 \), the current screen executes and OMEGAMON II fetches the next screen space.

For example, the following command returns to the calling screen space after 7 cycles:

**6.RTN**

- **cc**: The variable cc is the NR (no reset) argument. It prevents the .RTN command from automatically resetting the automatic update interval and the log status.

- **aaaaaaa**: This optional argument specifies a screen space for ASF or TSF to return to other than the calling screen space.

The .RTN command automatically resets the automatic update interval and the log status to that in effect when the ASF or TSF sequence began, unless NR is specified (see cc above).

/S

Saves the specified new screen.

The format is:

/S cccccc,a

/S is an alias for /SAVE. See the description of the /SAVE command for complete information.
/SAVE

Saves the specified new screen.

The /SAVE command works only if you have an RKO2PCSV dataset and cccccccc does not already exist. If cccccccc already exists, use /REP.

The format is:

/SAVE cccccccc,a

cccccccc    Specifies the screen name (1 to 8 characters).

a    One of three arguments that may follow the screen space name. The argument is separated from the screen space with a comma (,).

B    Saves the screen space to both RKO2PCSV and main storage (in-storage screen facility).

D or b    Saves the screen space to RKO2PCSV only (default).

I    Saves the screen space to main storage only.

OMEGAMON II substitutes a D for a dot (.) in screen space names.

This next example saves the current screen SAMPLE in both main storage and RKO2PCSV.

/SAVE SAMPLE,B

The default cursor position is the first position of the INFO-line. However, if you want to save the cursor in any position on the screen, type /SAVE on the INFO-line but do not press Enter. Move the cursor to the desired position and then press Enter to execute /SAVE. The cursor will display in that position whenever OMEGAMON II invokes the screen.

If you want to look at or edit a screen space using a text editor, be aware of the following:

- CURS=(n,m) appears at the top left corner of the INFO-line to indicate the cursor position in the saved screen.
- The variable n specifies the cursor row position, and m specifies the column position.
- You can add or change the cursor position in a saved screen using a text editor by adding or changing CURS=(n,m).

/S is an alias for /SAVE.
SCHN

Scans data-only space control blocks for a string of data and displays the location.

Use SCHN to search chained control blocks located in a data-only space for the occurrence of a specific string of data. SCHN scans data-only space storage until either a match to the string is found, the chain loops, or the address of the next control block is zero.

The format is:

```
aSCHNc jobname,spacename,addr,string,off1,off2,plen
```

- **a** A required action character in column 1:
  - Changes to a comment character (>) after the command executes.
  - < Does not change to a comment character after the command executes. Use this action character to repeat the command.

- **c** The format of the output:
  - B or b hex and character (default)
  - C character only
  - X hex only

- **jobname** The jobname or ASID in decimal of the owner of the data-only space.

- **spacename** The name of the data-only space.

- **addr** The starting address of the scan. (For more information about how to specify an address, see the MCHN command.)

- **string** The comparison string for the scan, which may be either a hexadecimal string or a character string surrounded by single quotes.

- **off1** The offset from the beginning of the control block to the location of the comparison string. This value may be preceded by a plus (+) or a minus (-) sign.

- **off2** The offset from the beginning of the control block to the fullword address of the next control block. This value may be preceded by a plus (+) or a minus (-) sign.

- **plen** The length of print display. The default is 1 line or 16 bytes.
**OMEGAMON Commands Screen**

**SCRN**

Lists screen member names.

The format is:

```
SCRN c aa bb
```

- **c**
  - Enter one of the following arguments in column 6 to specify the source of the member list.
  - **B or b**
    - Lists all screens in both disk datasets (RKO2PCSV) and main storage (default).
  - **C**
    - Lists all screens in disk datasets only.
  - **X**
    - Lists all screens in main storage (in-storage) only.

- **aa bb**
  - Lists all screens beginning with characters aa to bb (start aa in column 8).

- **a**
  - Lists all screens beginning with character(s) a (start a in column 8).

The following example lists all screens stored in both disk datasets and main storage that have names starting with C or D.

```
SCRNB C D
```

The next example lists all screens in main storage from PA to PA999999.

```
SCRNI PA+
```

or

```
SCRNI PA  PA
```

**.SGO**

Goes to screen cccccccc on next update.

The format is:

```
.n.SGO cccccccc  keyword{=| aa }argument
```

The .SGO command allows screens to branch to other screens.

For example, the following command fetches screen SAMPLE on the next cycle.

```
SGO SAMPLE
```

The optional value *n* allows you to delay the fetch of screen cccccccc for *n* cycles. The value of *n* can be between 1 and 35. Use the numbers 1 to 9 or the letters A to Z (to represent 10 to 35 cycles). Each time the screen updates, *n* decrements by one. When *n* equals 0, screen cccccccc is fetched on the next cycle.

The next example delays fetch of screen SAMPLE for 11 cycles, and fetches it on the next cycle after *n* equals 0.

```
B.SGO SAMPLE
```

---

Conditional Parameters

The .SGO command also has a conditional screen fetch feature that fetches a screen only if a condition is true. The condition is expressed as follows:

\[ \text{.SGO cccccccc keyword[=| aa ]argument} \]

The keyword can be one of the following:

- **CPSER=** Compares the CPU serial number.
- **MODE=** Compares the 3-character OMEGAMON II mode ID (displayed on the INFO-line). For example, DED, VTS, VTT, VTM.
- **OPSYS=** Compares the 3-character ID for the operating system level (XA1).
- **SMFID=** Compares the 4-character SMF ID.
- **UNIT=** Compares the terminal address of the primary OMEGAMON II console (only in dedicated mode).
- **USER=** Compares the 2-character suffix of the user profile.

The relational operator is either an equal sign (=) or a 2-character operator aa separated by blanks. The operator aa can be:

- **EQ** Keyword equals argument. Same as equal sign (=).
- **GE** Keyword is greater than or equal to argument.
- **GT** Keyword is greater than argument.
- **LE** Keyword is less than or equal to argument.
- **LT** Keyword is less than argument.
- **NE** Keyword is not equal to argument.

The argument is a 1- to 8-character value to which OMEGAMON II compares the keyword.

For example, to fetch screen SAMPLE only if you are running in an XA environment, enter:

\[ \text{.SGO SAMPLE OPSYS=XA1} \]

or

\[ \text{.SGO SAMPLE OPSYS EQ XA1} \]

**Note:** A blank is not a valid keyword, relation, or argument. Additionally, if you use a variable as the keyword or argument, the variable cannot begin with a blank.

When you use the 2-character operator aa instead of the equal sign =, there must be at least one blank separating the keyword, operator, and argument. The equal sign requires no separation.

If multiple .SGO commands appear on one screen, the last one that is executable takes precedence.

See the .FGO command for other methods to fetch screens.
SLST

Displays bytes of memory from data-only space storage.

The format is:

```
SLST jobname,spacename,addr,plen
```

- **a**
  
  A required action character in column 1:

  - Changes to a comment character (>) after the command executes.
  - < Does not change to a comment character after the command executes. Use this action character to repeat the command.

- **c**

  Specifies the format of the output:

  - **B or b** dump format (default)
  - **C** character only
  - **X** hex only

- **jobname**

  The jobname or ASID in decimal of the owner of the data-only space.

- **spacename**

  The name of the data-only space. (For more information about specifying an address, see the MCHN command.)

- **addr**

  The starting address of the data. (For more information about specifying an address, see the MCHN command.)

- **plen**

  The number (1 to 8 hex digits) of bytes to print. The default is 16 (X'10') bytes or 1 line.

SLST will list memory from data-only spaces. When necessary, an SRB will be scheduled into the address space of the TCB owning the data-only space to be listed.

Here is an example of using SLST.

```
<SLST MYJOB,MYSPACE,1000,20
+Storage at 00001000 in dataspace MYSPACE, job MYJOB ASID=12
 + 0000 E3C5E2E3 40C4C1E3 C140E2D7 C1C3C540 *TEST DATA SPACE *
 + 0010 F0F1F2F3 F4F5F6F7 F8F9C1C2 C3C4C5C6 *0123456789ABCDEF*
```
SSCN

Scans data-only space storage for the occurrence of a specific string of data.

Command format:

```
aSSCNc jobname,spacename,addr,string,len1,len2
```

- **a**: A required action character in column 1:
  - Changes to a comment character (>) after the command executes.
  - Does not change to a comment character after the command executes. Use this action character to repeat the command.

- **c**: Specifies the format of the output:
  - \( B \) or \( b \): dump format (default)
  - \( C \): character only
  - \( X \): hex only

- **jobname**: The jobname or ASID in decimal of the owner of the data-only space.
- **spacename**: The name of the data-only space.
- **addr**: The starting address of the scan. (For more information about specifying an address, see the MCHN command.)
- **string**: The comparison string for the scan. Either a hexadecimal string or a character string surrounded by single quotes.
- **len1**: The length to scan in hex. Default is 256 (x’100’) bytes.
- **len2**: The length of print display. Default is 1 line or 16 (x’10’) bytes.

SSCN will scan data-only space storage until a match to the string is found or the length of storage specified is exhausted. When necessary, an SRB will be scheduled into the address space of the TCB owning the data-only space to be scanned.

Following is a sample SSCN display.

```
<SLST MYJOB,MYSPACE,1000,20
+Storage at 00001000 in dataspace MYSPACE, job MYJOB ASID=12
  +0000 E3C5E2E3 40C4C1E3 C140E2D7 C1C3C540 'TEST DATA SPACE'
  +0010 F0F1F2F3 F4F5F6F7 F8F9C1C2 C3C4C5C6 '0123456789ABCDEF'
```

/STOP

Stops OMEGAMON II.

STOP performs the same function.

/STOP performs the same function.
SZAP

Modifies the contents of data-only space storage.

<table>
<thead>
<tr>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a potential integrity exposure when using SZAP on hiperspaces. SZAP will use HSPSERV to read in a page of data from the target hiperpace, check the data, alter the data, and finally use HSPSERV to write the page back to the hiperspace. If someone else is writing to the same page of the hiperspace while this process is occurring, the newly entered data could be lost. There is no available enqueue mechanism to guard against this exposure.</td>
</tr>
</tbody>
</table>

The format is:

```
-SZAP  jobname,spacename,addr,vercode,repcode
```

- Action character required for execution.

  **jobname**  
  Jobname or ASID in decimal of the owner of the data-only space.

  **spacename**  
  The name of the data-only space.

  **addr**  
  The starting address of the data. (For more information about specifying an address, see the MCHN command.)

  **vercode**  
  The current code to be verified in hexadecimal.

  **repcode**  
  The replacement code in hexadecimal.

The lengths of **vercode** and **repcode** must match.

When necessary, an SRB will be scheduled into the address space of the TCB owning the data-only space to be zapped. Here is an example of using SZAP.

```
>SZAP MYJOB,MYSPACE,1000,00000005,00000008
>      >> OB7110: Memory Zap Successful <<
```

/ TOP

Scrolls to the top of the logical screen.

.TSF

The times screen facility (TSF) schedules certain screen spaces not on an exception basis, but rather at specified times of day or at specified intervals. For example, you may want to issue a DB2 trace command automatically at 2:00 p.m. every weekday, and then turn it off again at 2:15. You may also want to invoke a screen space and have its commands executed and logged at regular intervals, such as every hour.
To use TSF, follow this procedure.

1. Create any screen spaces you want TSF to invoke. You can use the .SGO or .FGO command to chain screens together, and .RTN to end the cycle. Special considerations for creating screen spaces in TSF are discussed later in this chapter.

2. Turn on TSF with the TSF keyword of the OPTN command.

3. The .TSF00 command lists all entries in the TSF table. The TSF table is shipped with 99 blank entries. For example:
   
   ```
   .TSF00
   + 1 Time=0000 SS=*NONE* DAY=DAILY
   + 2 Time=0000 SS=*NONE* DAY=DAILY
   + 3 Time=0000 SS=*NONE* DAY=DAILY
   + 4 Time=0000 SS=*NONE* DAY=DAILY
   ```

   Enter .TSFnn to display entry nn in the TSF table. To define an entry, type .TSF followed by the number of the entry. For example, type .TSF01 to produce:
   
   ```
   .TSF01 Time=0000 SS=*NONE* DAY=DAILY
   ```

   You can type the new entry over the current entry, press Enter, and the value is reset.

   If you want to change an entry that does not appear on the physical screen, you can specify an argument to skip nn entries. Type .TSF00 20 to display entries 21 through 99 in the TSF table, skipping the first 20.

Following are the keywords and valid entries.

**Time**

Specifies the time of day (from 0000 to 2400) to invoke the screen. TIME=+nn invokes the screen every nn minutes.

*Note:* The screen space will not execute while the TIME=+nn entry remains on your current screen.

**SL or SS.**

Specifies the screen space to invoke if TSF is in effect. SS specifies the screen space to invoke, but does not turn on the log. SL automatically turns on the REPORT log when the screen is fetched, and screen space logging starts. You must specify either SS or SL for TSF to function.

**DAY**

The valid entries for day of week are MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY, WEEKDAY, WEEKEND, and DAILY. The days of the month are also valid entries (numerals 1 through 31). The default value is DAILY. You may abbreviate the input as long as it is unique and as long as the day of the week is recognized.

You may specify day combinations by enclosing the names of the days within parentheses, and by separating each day with either a comma or a blank.
Here is an example of five TSF entries.

<table>
<thead>
<tr>
<th>TSF Entry</th>
<th>TSF ID</th>
<th>Time</th>
<th>Screen Log</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSF01</td>
<td>1</td>
<td>1800</td>
<td>WENDSHFT</td>
<td>DAILY</td>
</tr>
<tr>
<td>TSF02</td>
<td>2</td>
<td>0600</td>
<td>WEEKSTRT</td>
<td>MONDAY</td>
</tr>
<tr>
<td>TSF03</td>
<td>3</td>
<td>1200</td>
<td>NOONTIME</td>
<td>(TH,F)</td>
</tr>
<tr>
<td>TSF04</td>
<td>4</td>
<td>0800</td>
<td>MONTHEND</td>
<td>30</td>
</tr>
<tr>
<td>TSF05</td>
<td>5</td>
<td>+30</td>
<td>STATUS</td>
<td>DAILY</td>
</tr>
</tbody>
</table>

- **TSF01**
  - EXECutes and logs screen space WENDSHFT at 6:00 p.m. daily.
- **TSF02**
  - EXECutes screen space WEEKSTRT at 6:00 a.m. every MONDAY.
- **TSF03**
  - EXECutes and logs screen space NOONTIME at 12:00 p.m. every Thursday and Friday.
- **TSF04**
  - EXECutes screen space MONTHEND on the 30th of each month at 8:00 a.m.
- **TSF05**
  - EXECutes and logs screen space STATUS every 30 minutes every day.

/U

Scrolls up the amount of lines specified by argument cccc.

/U is an alias for /UP. See the description of the /UP command for complete information.

/UP

Scrolls up the amount of lines specified by argument cccc.

The /UP command works only if you set the number of logical rows (LROWS) to a number greater than the number of physical rows on this terminal when you initialize OMEGAMON II.

The format is:

```
/UP cccc
```

- **nnn**
  - Scrolls nnn lines (from 1 to 999).
- **CSR**
  - Scrolls according to the current location of the cursor. If the cursor is on the INFO-line, the scroll amount is a page.
- **MAX**
  - Scrolls to the top of the screen.
- **PAGE**
  - Scrolls so that the current cursor position is at the top of the screen (default).
- **TOP**
  - Scrolls to the top of the screen.

The following example scrolls up 20 lines.

```
/UP 20
```

If you have assigned the /UP command to a PF key (the default is PF19), you can type any of the optional arguments on the INFO-line before you press the PF key, and OMEGAMON II interprets the entry as if you had typed the command plus the arguments.

/U is an alias for /UP.
.VTM
Displays terminal ID and session information for all users logged onto OMEGAMON II in VTAM mode.
This command allows a user running in a multi-session environment moderated by O2VTAM to display information about other O2VTAM users. Operations personnel can use this command to monitor and manage access to the VTAM environment.
The .VTM command displays the following information: user ID, terminal ID, mode, session start date and time, date and time of last update. (User ID will be displayed only if external security is being used to control logon access.)

.WAT
Waits nn seconds (.WAT nn) before executing all commands below.
The .WAT command provides a delay mechanism for the execution of commands that require information from a currently executing command. This command is useful when you want a delay between operator commands.

XGRP
Invokes exception analysis for exception group cc.
The format is:

XGRPPcc

The XGRP command only invokes exceptions of a certain group. In this sense, it is merely a subset of the EXSY command.
The variable cc indicates the exception group type. These types are:

- CI CICS exceptions
- IM IMS exceptions
- SY system exceptions
- TH thread exceptions
XGSW

Set exception group switch settings. In addition to the control available over each individual exception, you can override certain options for an entire exception group.

The format is:

```
XGSW GROUP=cc STATE=cccc
```

**GROUP**

Any two unique alphanumeric characters to specify the group. Use this keyword to display only entries for a particular group.

**STATE**

Controls whether the exception is in any of these five states:

- **ON** Invokes this exception during the current session.
- **OFF** Does NOT invoke this group of exceptions during the current session.
- **TEST** Forces a sample warning message, even if the exception condition is not presently occurring, for purposes of training or demonstration. (When a message has been displayed because of TEST mode, a T appears in column 2 of the message lines.)
- **NULL** Specifies the individual exception is to maintain control rather than the group switch. This is the default.

XMCH

Scans DB2 storage.

Because this command uses additional overhead to collect its data, this command requires special authorization. Before OMEGAMON II will display this data, you must enter a valid password using the /PWD command.

XMCH scans the elements of a table for a string of hex or character values. If the scan is successful, OMEGAMON II displays the table element that contains the string.

Use XMCH to search DB2 address spaces. Use MCHN to search the address space in which OMEGAMON II resides.

The format is:

```
aXMCHc targ,addr,string,olen,chain,dlen
```
a  An action character in column 1:
   - Changes to a comment character (>) after the command executes.
   < Does not change to a comment character after the command executes. Use this action character to repeat the command.

c  The format of the output:
   B or b  hex and character (default)
   C       character only
   X       hex only

addr The target DB2 address space. It can be:
   nnnn  decimal ASID number
   ccccccc jobname

   If you do not specify a DB2 address space, an error message appears.

string The hex string OMEGAMON II uses for the scan. If you enclose it in single quotes, OMEGAMON II assumes it is a character string.

   Note: OMEGAMON II interprets two single quotes (‘ ') within a character string as a single quote (‘ ).

olen The offset (in hex bytes) to the string in the table element; the comparison starts at this point. You may precede olen by a plus sign (+) or minus sign (-).

chain The offset (in hex bytes) to the chain pointer (the location in the table element that contains the address of the next table element). You may precede chain by a plus sign (+) or minus sign (-).

dlen The number of bytes (1 to 8 hex digits) that OMEGAMON II displays if the scan is successful. The display starts at the beginning of the table element. The default is 16 (X'10') bytes.
You must make sure that `addr` is the starting point of a table element. The address at `+ chain` points to the next table element. The scan ends when the value at `addr + chain` is one of the following:

- 0
- -1
- `addr` (the table is a ring)

The example below shows a typical XMCH command. In this example, XMCH scans a table in the target DB2 address space that starts at location AAB6C8 and looks for the string D6C30199 that begins at the eighth byte of the table element. The address of the next table element is in the fourth word. By default, this command displays 16 bytes of the table element in hex and character format.

```
-XMCH USER14,AAB6C8,D6C30199,8,4
```

The following output appears if the scan is successful:

```
>XMCH USER14,AAB6C8,D6C30199,8,4
>Storage at 007DA000 in USER14 ASID=21:
> 0000 E2E2C3E3 00000000 D6C30199 00000000 *SSCT OC r *
```

**XMLS**

Displays DB2 storage.

Because this command uses additional overhead to collect its data, this command requires special authorization. Before OMEGAMON II will display this data, you must enter a valid password using the /PWD command.

XMLS displays bytes of storage from a DB2 address space.

The format is:

```
aXMLSc targ,addr,len
```

- `a` An action character in column 1:
  - `c` Changes to a comment character (>) after the command executes.
  - `<` Does not change to a comment character after the command executes. Use this action character to repeat the command.

- `B` or `b` hex and character (default)
- `C` character only
- `X` hex only
The target DB2 address space. It can be:

```
|nnnn| decimal ASID number
```

```
|cccccccc| jobname
```

If you do not specify a DB2 address space, an error message appears.

```
addr
```

The first address of storage that OMEGAMON II displays. (For more information about how to specify an address, see the MCHN command.)

```
len
```

The number (1 to 8 hex digits) of bytes that OMEGAMON II displays. The default is 16 (X’10’) bytes.

The following examples show uses of the XMLS command.

In the first example, XMLS displays 32 (X’20’) bytes from address space 21, starting at address 1EB0, in character format.

```
>XMLSC 21,1EB0,20
```

Typical output is:

```
>XMLSC 21,1EB0,20
>storage at 00001EB0 ASID=21:
>0000 *ABCDEFGH IJKLMNOP QRSTUVWX Z0123456
```

In the second example, XMLS displays 16 (X’10’) bytes from the target DB2 address space specified by the jobname USER14, starting at 1EB0 in both hex and character formats.

```
>XMLS USER14,1EB0,10
```

Typical output is:

```
>XMLS USER14,1EB0,10
>storage at 00001EB0 in USER14 ASID=21:
>0000  C1C2C3C4 C5C6C7C8 C9D1D2D3 D4D5D6D7  *ABCDEFHIJKLMNOP*
```

In the third example, XMLS displays 16 (X’10’) bytes from address space 21, starting at FF32D6 in hex and character format. The less-than symbol (<) prevents OMEGAMON II from commenting out the command.

```
<XMLSB 21,FF32C1+15,10
```

Typical output is:

```
<XMLSB 21,FF32C1+15,10
+storage at 00FF32D6 in DB2 ASID=21:
+0000  4AA800F7 D3700000 00000000 000000F8  *y..7L.........8*
```
**XMSC**

Scans DB2 storage.

Because this command uses additional overhead to collect its data, this command requires special authorization. Before OMEGAMON II will display this data, you must enter a valid password using the /PWD command.

XMSC scans a DB2 address space for a string of hex or character values. If the scan is successful, OMEGAMON II displays the string.

The format is:

```
aXMSCc targ,addr,string,slen,dlen
```

- **a** An action character in column 1:
  - Changes to a comment character (>) after the command executes.
  - Does not change to a comment character after the command executes. Use this action character to repeat the command.

- **c** The format of the output:
  - **B or b** hex and character (default)
  - **C** character only
  - **X** hex only

- **targ** The target DB2 address space. It can be:
  - `nnnn` decimal ASID number
  - `cccccccc` jobname

  If you do not specify a DB2 address space, an error message appears.

- **addr** The start address of the scan. (For more information about how to specify an address, see the MCHN command.)

- **string** The hex string OMEGAMON II uses for the scan. If you enclose it in single quotes, OMEGAMON II assumes it is a character string.

  **Note**: OMEGAMON II interprets two single quotes (‘ ’) within a character string as a single quote (‘’).

- **slen** The number (1 to 8 hex digits) of bytes that OMEGAMON II scans. The default is 256 (X’100’) bytes.
### OMEGAMON Commands Screen

**dlen**

The number of bytes (1 to 8 hex digits) that OMEGAMON II displays if the scan is successful. The display starts at the beginning of the table element. The default is 16 (X'10') bytes.

In the next example, XMSC scans 1000 bytes in the target DB2 address space specified by the jobname USER14, starting at location 515988 for the character string WORKAREA. If the scan is successful, OMEGAMON II displays 14 hex bytes in hex and character format starting at WORKAREA.

```
-XMSC USER14,515988,'WORKAREA',1000,14
```

The following output appears if the scan is successful:

```
> XMSC USER14,515988,'WORKAREA',1000,14
> storage at 00515988 in USER14 ASID=21:
> 1B8 E6D6D9D2 C1D9C5C1 00000000 000C0000 "WORKAREA......."  
> 1C8 000C002C                         "...."
```

**XMZP**

Modifies another user’s private storage area.

Because this command can perform potentially dangerous functions, this command requires special authorization. Before OMEGAMON II will execute this command, you must enter a valid password using the /PWD command.

>XMZP targ,addr,ver,rep

The format is:

```
xXMZP targ,addr,ver,rep
```

- **a** An action character in column 1:
  - Changes to a comment character (>) after the command executes.
  - < Does not change to a comment character after the command executes. Use this action character to repeat the command.

- **targ** The target DB2 address space. It can be:
  - **nnnn** decimal ASID number
  - **cccccccc** jobname

If you do not specify a DB2 address space, an error message appears.
addr  The address of the string OMEGAMON II may modify. (For more information about how to specify an address, see the MCHN command.)

ver  The verify string; OMEGAMON II modifies storage only if OMEGAMON II finds this string at addr. If OMEGAMON II does not find the string, it displays what is actually at addr.

rep  The replacement string. If OMEGAMON II finds ver at addr, rep replaces ver.

Note: The strings ver and rep must be the same length.

In this example, XMZP changes a byte at location A0160 in the master scheduler address space.

-XMZP  *MASTER*,A0160,0A,64

In the next example, XMZP changes a halfword at C4834 in the PRODJOB address space from X'1854' to X'0700'.

-XMZP PRODJOB,C4834,1854,0700

.ZAP  Displays the maintenance level of the OMEGAMON II realtime modules.

For more information about the .ZAP command, see Installing Candle Products on MVS.

/ZOOM  Invokes navigational zoom feature using the cursor as a pointer.

The zooming feature is designed to simplify the investigation of system conditions by supplying a detailed level of information at the touch of the zoom key. /ZOOM substitutes whatever value the cursor is on for a variable contained in a predefined screen space. The variable substitution allows the zooming screen space to have multiple uses.

To illustrate the use of the zooming feature, the following discusses three types of applications. First, you should be aware of the following points:

- Candle ships OMEGAMON II with the /ZOOM INFO-line command assigned to PF key 11 so you can use the zooming screen spaces with a single key. For this discussion, PF11 is referred to as the zoom key.
- Zooming screen spaces must be set up prior to using /ZOOM. These screen spaces can contain one or more of the following variables:
  - &ZOOM Data found at the cursor location.
  - &ZOOMA Command argument field (columns 6 and 7).
  - &ZOOMC Command or exception name field (columns 2 to 5).
  - &ZOOML Command label field (column 1).
  - &ZOOMS Originating screen space.

OMEGAMON II provides sample zooming screen spaces that you can use to become familiar with both the setup of a zooming screen space and the types of commands for which /ZOOM is most appropriate. To see the names of those screen spaces, use the SCRN command and look for screen spaces beginning with @Z.
Following are three illustrations of using the zooming feature:

1. This first example uses a screen space that is supplied on your OMEGAMON II tape. The example is easier to understand if you actually execute the commands on your system while you follow the discussion.

   a. Type the command THDA. THDA produces a list of active threads.

   
<table>
<thead>
<tr>
<th>THDA</th>
<th>Elapsed</th>
<th>Planname</th>
<th>CPU</th>
<th>Status</th>
<th>GetPg</th>
<th>Update</th>
<th>Commit</th>
<th>Jobname</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:53:59.05</td>
<td>PLAN0090</td>
<td>12.2%</td>
<td>In-DB2</td>
<td>6231</td>
<td>381</td>
<td>123</td>
<td>CICSPROD</td>
<td></td>
</tr>
<tr>
<td>00:12:37.16</td>
<td>PLAN0100</td>
<td>11.1%</td>
<td>In-SQL-Call</td>
<td>1943</td>
<td>0</td>
<td>189</td>
<td>TSOUSER1</td>
<td></td>
</tr>
<tr>
<td>00:09:29.27</td>
<td>PLAN0001</td>
<td>2.0%</td>
<td>In-DB2</td>
<td>1111</td>
<td>21</td>
<td>14</td>
<td>IMSA</td>
<td></td>
</tr>
</tbody>
</table>

   b. To examine one of the threads more closely, place your cursor under the planname you want to query, PLAN0001 in this case, and press PF11. OMEGAMON II looks for a screen space starting with @ZSM and ending with the command name that precedes the cursor. OMEGAMON II finds the screen space @ZSMTHDA:

   ```
   PLAN &ZOOM
   ACT
   ```

   /ZOOM replaces the variable &ZOOM with the planname over the cursor. The result might look like this:

   ```
   PLAN
   + Thread: Planid=PLANABCD Connid=IMSA Corrid=0014PSBNAME1 Authid=IMSUSER1
   + Attach: IMS Region number = 11 IMS Tran = TRANDB2A
   ```

   ```
   + Thread Status
   +
   + DB2 Status = In-SQL-Call MVS Status = Wait-Misc
   + Elapsed Time = 00:00:00.0 CPU Utilization = 11.0
   + In-DB2 Time Total = 00:03:01.1 In-DB2 CPU Time Total = 1.30
   + In-DB2 Time Current = 00:02:02.2 In-DB2 CPU Time Current = 1.23
   +
   + Thread Buffer Manager Activity
   +
   + Getpage Requests = 99 Getpages/Read I/O = 7.07
   + Synchronous Reads = 14 Page Updates = 3
   + Sequential Prefetch Reqs = 48 Buffer Pool Expansions = 0
   ```
c. You could now place your cursor on a different planname and press PF11 again to receive the same detail on another thread. A zooming screen space can display more detailed analyses of any thread.

2. Suppose that the THDA command in example 1 was originally executed as part of a different screen space (not a zooming screen space) that you had been using. We will call that screen space THREADS. If the @ZSMTHDA screen space ended with the command, .SGO &ZOOMS, the &ZOOMS variable would pick up the value of the originating screen space (THREADS) and OMEGAMON II would return to THREADS after the @ZSMTHDA screen space executed.

3. Suppose that you have issued the exception analysis command, LEXSY, and an exception condition is displayed (LEXSY) that you wish to investigate further. Assuming that you have a predefined screen space named @ZSMcccc where cccc is the name of the exception, place your cursor under the exception name on the LEXSY screen and press PF11. OMEGAMON II will execute the commands on your @ZSMcccc screen space to give you a detailed analysis of the condition.
Introduction

This chapter provides information about the Profile Maintenance Facility.

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Customizing and Storing Characteristics in Profiles

The profile maintenance facility allows you to customize the characteristics of your active OMEGAMON II session and store these characteristics in a profile. The profile maintenance facility also helps you to change or delete existing profiles.

Default Values

By default, your OMEGAMON II session is started with the Candle profile (identified by its suffix of /C). If your installation has an installation profile, your OMEGAMON II session is started with a concatenation of the default profile and the installation profile. This concatenation is identified with a profile suffix of /I.

You may also merge a user profile to the Candle and installation profiles. If you do this, OMEGAMON II displays the 2-character suffix of the user profile on the top line of the screen after the version number (for example, V110.AZ).

Candle ships a profile with the product. The Candle profile contains session configuration options needed to initialize an OMEGAMON II session. The Candle profile also contains the default exception analysis thresholds.

The installation profile is a set of session and exception analysis options that the installer defines for all OMEGAMON II sessions at your installation. The installation profile can contain overrides of Candle profile options and/or additional options that are installation-specific or that are not contained in the Candle profile.

User Profiles

Individual OMEGAMON II users can create one or more user profiles to customize an individual OMEGAMON II session. A user profile can contain overrides of both Candle and installation profile options, as well as additional options that are not contained in the Candle and installation profiles.

Note:

1. When you create or change a user or installation profile, you must save it if you want the selected options/values to be permanent. (Select the Save Install option from the Profile Maintenance Menu.)

2. **For CUA Interface Users**: To set exception thresholds for the CUA interface, log directly onto that interface. Any changes you make to CUA thresholds will also change the thresholds in the classic interface. However, any changes you make through the classic interface will not affect your CUA interface threshold settings.
Screens for profile management

OMEGAMON II allows you to customize and maintain profiles through the following screens:

- Profile Maintenance Menu
- Set Display Options
- Set Control Function Options
- Set Printer and Routing Options
- Set Exception Analysis Message Option
- Set Performance Options
- Set Background Exception Processing
- Exception Analysis Options Menu
- Set Exception Analysis Options
- List Profiles
- Describe a Profile
- Save New/Altered User Profile
- Delete User Profile
- Save New/Altered Installation Profile
- Delete Installation Profile
- Exception Logging Menu
- Set XLF Printer and Routing Options
- Set DB2/IRLM Messages that MSGE Exception Monitors

Customization considerations

The rhlev.RKD2TDB dataset contains, basic CUA startup information, CUA user profiles, and CUA subsystem profiles. The first time that the CUA is started, the rhlev.RKD2TDB dataset is automatically initialized with basic CUA startup information. If you choose to create any customized CUA user profiles or CUA subsystem profiles, Candle highly recommends that you regularly backup the rhlev.RKD2TDB dataset.
Profile Maintenance Menu

The Profile Maintenance Menu is the first screen for the Profile Maintenance Facility. From this screen, you can access screens to change the characteristics of exceptions, change the options for the current OMEGAMON II session, save a profile, delete a profile, see a list of all profiles, or add a description to a profile.

Highlighting

OMEGAMON II does not highlight any fields on the Profile Maintenance Menu.

Navigation

For additional options
- choose one of the options from the menu
- use the OMEGAMON II PF keys

Fields

The Profile Maintenance Menu does not display any output. It displays navigation options to the other screens that allow you to create, delete, and maintain profiles.
Set Display Options

The Set Display Options screen allows you to set a number of options that control how OMEGAMON II operates on your terminal (such as the colors on the screen and when the audible alarm sounds). It also allows you to turn on and off exception message logging (XLF), automatic screen logging (ASF), and the timed screen facility (TSF).

Highlighting

OMEGAMON II does not highlight any fields on the Set Display Options screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys
You can change the values on the Set Display Options screen. To modify a setting, move the cursor to the value you want to change, type the new value over the current value, and press Enter to record the change.

**ASF**

The current status of the automatic screen facility (ASF). Allowable values are ON and OFF. The default is OFF.

**BELL**

The current status of the audible alarm (ON or OFF). The default is OFF.

**BELLINT**

The minimum interval for audible alarm. The default is 5.00 seconds. The maximum interval is 99.00 seconds.

**DATEFORMAT**

The display format of the date. Specify the format as USA (mm/dd/yy) or EUROPEAN (dd/mm/yy). The default is USA.

**FIRSTSCREEN**

The first screen OMEGAMON II displays after the copyright screen. You cannot change this value. The screens are arranged for easy access to product information.

**LOG**

The current status of the log function (ON or OFF). The default is OFF. When the log function is ON, the current logical screen is logged each time you press Enter (or at regular intervals, if you are in automatic update mode). See the description of the PAGELIMIT field on page 415.

**MINORCASE**

The type of letters OMEGAMON II uses to display minor commands (upper or lower case). The default is LOWER.

**SCREENCASE**

The type of letters OMEGAMON II uses to display its output on the screen (upper or mixed case). The default is MIX.

**SCROLL**

The amount to scroll the page. The default is a full page (PAGE). It can also be the position of the cursor (CSR).

**TSF**

The current status of the timed screen facility (TSF). Allowable values are ON and OFF. The default is OFF.

**XLF**

The current status of the exception logging facility (XLF). Allowable values are ON and OFF. The default is OFF.

**ZEROS**

The type of zero display. When this parameter is ON, OMEGAMON II displays the number 0 in fields that have a value of 0. When this parameter is OFF, OMEGAMON II displays a blank in these fields. OMEGAMON II does not save the value of this field in a profile. This value will return to the default each session.
Display

Determines the type of entries that are acceptable in several other fields on this screen. If you want to change the display settings and save the changes in a profile, Profile Definition Mode must be turned ON before you make the changes.

**BASIC**

Allows you to set the intensity of field types (for example, major and minor commands) on monochrome terminals and non-EDS (extended data stream) color terminals. Allowable values are High and Low.

*Note: When the BASIC display option is used on color devices that can support EDS, OMEGAMON II will treat that device as a 4-base color terminal (non-EDS).*

**HIGH**

Specifies that all fields be displayed in high intensity.

**LOW**

Specifies that all fields be displayed in low intensity.

**COLOR**

For color EDS terminals only, allows you to specify the color of each field. Color names are red, green, white, blue, pink, yellow, and turquoise.

*Note: If you do not have a color terminal, setting Display to COLOR may cause your OMEGAMON II session to terminate.*

In cases where OMEGAMON II is given a color value instead of an intensity value or vice versa, it makes the following internal conversion:

- On a non-EDS terminal, values of green and blue translate to low intensity; all other color values translate to high intensity.
- On an EDS terminal, a value of HI translates to the color red; a value of LO translates to the color green.

ProfileDefinitionMode

Controls the definition of color and highlighting within a user profile.

**OFF**

Changes affect only the current OMEGAMON II session.

**ON**

Intended for use when creating or changing a user profile. After defining the settings, you must issue a profile save command in order for these definitions to be saved and reused. Setting this keyword to ON allows you to configure options for different types of terminals on the same screen. If you want to save color setting changes in a profile, Profile Definition Mode must be turned ON before you make the changes.
Set Display Options

**ExtendedHighlighting**

Used only with devices that support the extended data stream.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Extended highlighting features are not available. Use with non-EDS devices.</td>
</tr>
<tr>
<td>ON</td>
<td>Extended highlighting features are available. When Display=COLOR, this value is automatically set to ON. (Extended attributes are not supported in ISPF mode.)</td>
</tr>
</tbody>
</table>

**Caution**

Do not set ExtendedHighlighting to ON unless you have a terminal that supports an extended data stream (or unless you have ProfileDefinitionMode is ON). If you do this accidentally, you may get a PROGnnn or a screen erasure error. You may press the ATTN or PA1 key to resume the session, but be aware that this action also clears the current security authorization and the current screen.

**Major**

Controls color or highlighting for major commands and their output.

**Minor**

Controls color or highlighting for minor commands and their output.

**Immed**

Controls color or highlighting for immediate commands and their output.

**Default**

Controls color or highlighting for other unprotected fields (for example, error message text, help text).

**XACB Display Options**

Controls exception analysis message text. The fields Clr1 through Clr7 can be used as substitutes for the color names (Red, Blue, and so on) or highlighting (High and Low) when customizing exception messages with the XACB command.

The following table shows the possible variations of settings according to the type of terminal you are supporting.

**Table 1. Set Display Options Color/Highlighting Settings**

<table>
<thead>
<tr>
<th>If you have...</th>
<th>and you want...</th>
<th>keywords and possible settings are...</th>
</tr>
</thead>
</table>
| A non-EDS terminal | some fields in high intensity and some fields in low intensity | Display=BASIC  
ExtendedHighlighting=OFF  
Major, Minor, Immed, XACB options=HI|LO|DEF  
Default=HI|LO |
| all fields in high intensity | Display=HI  
ExtendedHighlighting=OFF  
(All other settings default to HI) |  

Caution
Table 1. Set Display Options Color/Highlighting Settings

<table>
<thead>
<tr>
<th>If you have...</th>
<th>and you want...</th>
<th>keywords and possible settings are...</th>
</tr>
</thead>
</table>
| A monochrome EDS     | all fields in low intensity                                                     | Display=LO  
ExtendedHighlighting=OFF  
(All other settings default to LO) |
| terminal             | some fields in high intensity and some fields in low intensity, plus blinking,  | Display=BASIC  
ExtendedHighlighting=ON  
Major, Minor, Immed, XACB  
options=HI|LO|DEF  
Default=HI|LO |
|                      | underscoring, or reverse video                                                 |                                                                 |
|                      | all fields in high intensity, plus blinking, underscoring, or reverse video    | Display=HI  
ExtendedHighlighting=ON  
(All other settings default to HI) |
|                      | all fields in low intensity, plus blinking, underscoring, or reverse video     | Display=LO  
ExtendedHighlighting=ON  
(All other settings default to LO) |
| A color EDS terminal | to specify the color of each field, plus blinking, underscoring, or reverse    | Display=COLOR  
ExtendedHighlighting=ON  
Major, Minor, Immed, XACB  
options=color|DEF  
Default=color |
|                      | video                                                                            |                                                                 |
Set Control Function Options

The Set Control Function Options screen allows you to set a number of options that control the way OMEGAMON II operates on your terminal (such as the size of the OMEGAMON II log file and how often OMEGAMON II updates the screen).

```
.SET
: FGOLIMIT     =       64      FGOLOOP      = OFF
: GDEVUCBS     =      200      INTERVAL     =     5.00
: IODELAY      =        5      LOOPCOUNT    =    15000
: LOOPTIME     =     5.00      PAGELIMIT    =      400
: PEEKSIZE     =    32768      STATUSMODE   = OFF
: OCMDMASTER   = ON
```

Highlighting

OMEGAMON II does not highlight any fields on the Set Control Function Options screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

You can change the values on the Set Control Function Options screen. To modify a setting, move the cursor to the value you want to change, type the new value over the current value, and press Enter to record the change.

**FGOLIMIT**
The maximum number of consecutive .FGO screens that can execute when OMEGAMON II detects a loop and FGOLOOP is ON. The default is 64. The maximum number is 1,000.

**FGOLOOP**
.FGO loop detection (ON/OFF). If OMEGAMON II detects an .FGO loop, it causes .FGO to work like .SGO so that the user can eliminate the loop.

**GDEVUCBS**
This setting does not apply to OMEGAMON II for DB2.
INTERVAL  The interval (in seconds) between automatic updates. The default is 5.00. The maximum is 99.00.

IODELAY  The number of cycles to hold the screen when the cursor moves. The default is 1. The maximum is 100.

LOOPCOUNT  The maximum number of control blocks that can be tested when executing the Examine Address Space screens before OMEGAMON II detects a loop. The default is 15000. The maximum is 60000.

LOPTIME  The threshold (in seconds and hundredths of seconds) for the OMEGAMON II built-in loop detection when executing the Examine Address Space screens. The default is 25.00. The maximum is 99.

PAGELIMIT  The size (in pages) of the REPORT file used to log OMEGAMON II screens. The default is 400. The maximum is 99999. This number decreases dynamically as the log prints to reflect the number of pages remaining in the log before this limit is reached. Consequently, be sure to check this parameter (and reset it, if necessary) before saving a profile.

PEEKSIZE  The size (in bytes) of the buffer for the Examine Address Space Screens. The default is 32768. The maximum is 204800.

STATUSMODE  This setting does not apply to OMEGAMON II.

OCMDMASTER  Sets the default console ID if none was specified with the OCMD command. Default is ON.

  ON  Master console.
  OFF  Console 00.
The Set Printer and Routing Options screen allows you to set a number of options that control the way OMEGAMON II logs output.

### Highlighting
OMEGAMON II does not highlight any fields on the Set Printer and Routing Options screen.

### Navigation
For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

### Fields
To modify an option, move the cursor between the name of the setting you want to change and the **Pending** column, type the new value, and press Enter. To save your changes, delete the comment character (>) next to .LOGOUT and press Enter. This releases the current log, moves the **Pending** values to the **Current** column, and reallocates the log using the new values.
**Note:** When a value appears within parentheses, it means that the field is inactive.

**.LOGOUT**  Prints the current log and leaves it open.  OMEGAMON II places a comment character in front of .LOGOUT so that the log is reset only on cycles when you remove the comment character (>).

**copy**  The number of copies to print.

**ddnm**  Overrides the standard OMEGAMON II ddname.  When DDNM is active, sout and its related parameters (copy, dest, dstu, form, and hold) are inactive.  The ddname must be allocated within the O2Cl started task JCL.

**dest**  The destination to receive the report.  The default is NONE, which sends the output to the local printer.  The device can be a terminal, a node, a remote workstation, a local device or group of devices, or a user ID.

**dstu**  The destination user ID to receive the report.

**fold**  Changes lowercase characters to uppercase.  The default is YES.

**form**  The name of the form on which to print.  The default is NONE.  This means that OMEGAMON II uses the form defined as your installation's default.  If you change NONE to some other value (such as HOLE), you can type an asterisk (*) to return to NONE.

**hold**  Specifies that the output be placed in the hold queue.  The default is NO.

**id1**  Requests separator pages and page headers that identify output from different OMEGAMON II sessions.

**id2**  Defines up to 16 characters to appear on the left of the separator page, justified below the ID1 heading.  ID1 must be set to use ID2.

**id3**  Defines up to 16 characters to appear centered on the separator page, below the ID1 heading.  ID1 must be set to use ID3.

**id4**  Defines up to 16 characters to appear on the right of the separator page, justified below the ID1 heading.  ID1 must be set to use ID4.

**lnct**  Sets the REPORT file line count.  The default is 60 lines.

**sout**  Specifies the SYSOUT class for the output.
Set Exception Analysis Message Option

The Set Exception Analysis Message Option screen allows you to set a message for OMEGAMON II to display on the Exception Messages screens if no OMEGAMON II exceptions are tripping when you display these screens.

Highlighting
OMEGAMON II does not highlight any fields on the Set Exception Analysis Message Option screen.

Navigation
For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields
OMEGAMON II displays the following field on the Set Exception Analysis Message Option screen:

XTXT Sets the message text.

You can change the message OMEGAMON II displays when no exceptions have exceeded their threshold values (and therefore, OMEGAMON II does not display any exception messages). To change the message, type the new message next to XTXT within single quotes and press Enter to record the change.
Set Performance Options

The Set Performance Options screen allows you to set options that control certain performance options such as how OMEGAMON II uses storage.

Highlighting

OMEGAMON II does not highlight any fields on the Set Performance Options screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Because this screen contains options that may have a great effect on the system, this screen may require special authorization. If OMEGAMON II prompts you for authorization, first type /PWD on the top line of the screen. Then type your password and press Enter. OMEGAMON II displays the following fields on the Set Performance Options screen:

**NONSWAP** This field does not apply to OMEGAMON II because OMEGAMON II always sets its storage to nonswappable.

**PAGEFIX** Makes OMEGAMON II storage page-fixed (ON or OFF). The default is OFF.
Set Performance Options

RESERVE  Controls whether a DASD RESERVE is issued when OMEGAMON II saves a screen into its screen dataset, RKO2PCSV, or a profile into its profile dataset, RKO2PFSV (ON or OFF). The default is OFF.

If you change the setting of this option, the new setting takes effect immediately.

TSOPFIX  This field does not apply to OMEGAMON II. Use the PAGEFIX option.

Note: RESERVE is the only option that takes effect immediately if you change it. All the other option settings take effect only after they are saved in a profile that is used in a subsequent session.
Set Background Exception Processing

The Set Background Exception Processing screen allows you to turn background exception processing on and off. When you set this option to OFF, CPU use will be reduced, assuming the XLF and ASF options are OFF and that foreground exception processing (EXSY/LEXSY) is OFF.

**Highlighting**

OMEGAMON II does not highlight any fields on the Set Background Exception Processing screen.

**Navigation**

For additional information about

- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

OMEGAMON II does not display any fields on the Set Background Exception Processing screen.

---

**Important**

When the command E. is used to fastpath to the exceptions screen, ZEXSY, an incorrect exception analysis may occur if XOPT is set to OFF. Hit Enter to refresh the screen and display the correct exception status.
Exception Analysis Options Menu

The Exception Analysis Options Menu allows you to select the exception type you want to access for option setting/viewing.

Highlighting

OMEGAMON II does not highlight any fields on the Exception Analysis Options Menu.

Navigation

For additional options, choose one of the options from the menu.

Fields

When you choose an exception type (for example, Thread) from the Exception Analysis Options Menu, OMEGAMON II displays a list of the exceptions in that group. You can then select a specific exception to set or view its characteristics.

If you select the Single option, OMEGAMON II displays a screen on which you can enter the name of the exception you want to view/change.
Set Exception Analysis Options

Use the Set Exception Analysis Options screen to view the current characteristics of an exception or to change the characteristics of an exception. You can also use this screen to display, add, and delete filtering rules for THREAD exception processing.

Highlighting

OMEGAMON II does not highlight any fields on the Set Exception Analysis Options screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cccc</td>
<td>Exception name.</td>
</tr>
</tbody>
</table>

Display Parameters

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>One of the following:</td>
</tr>
<tr>
<td></td>
<td><strong>ON</strong> Checks for this exception condition during the current OMEGAMON II session.</td>
</tr>
<tr>
<td></td>
<td><strong>OFF</strong> Does not check this exception condition during the current OMEGAMON II session.</td>
</tr>
<tr>
<td></td>
<td><strong>TEST</strong> Sets exception analysis into a test mode for this exception condition.</td>
</tr>
<tr>
<td></td>
<td>If you set an exception’s state to TEST and then type the word FORCE after the exception name, OMEGAMON II displays the exception’s message text below the parameters.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Because OMEGAMON II cannot provide a current value for the exception, the message text substitutes the value with an n variable.</td>
</tr>
<tr>
<td></td>
<td>When you force the exception this way, OMEGAMON II displays a T in column 2 of the exception text.</td>
</tr>
<tr>
<td></td>
<td>OMEGAMON II also displays the exception message with a T in column 2 on the Exception Messages screen.</td>
</tr>
<tr>
<td>Group</td>
<td>Displays the 2-character exception group identifier.</td>
</tr>
<tr>
<td>Bell</td>
<td>Specifies whether the audible alarm on the terminal sounds when this exception occurs.</td>
</tr>
<tr>
<td></td>
<td><strong>ON</strong> The bell sounds. This works only if the system bell is set to ON on the Set Display Options screen.</td>
</tr>
<tr>
<td></td>
<td><strong>OFF</strong> The bell does not sound.</td>
</tr>
</tbody>
</table>
Set Exception Analysis Options

Box Parameters

**Boxchar**

Specifies a box character enclosed in single quotes, or the string NO BOX (without quotes), which is the default. If Boxchar is NO BOX, OMEGAMON II does not place any box around the exception. Also, Boxclr and Boxattr will be set to NONE.

*Do not* use a single quote (‘) as a box character, since it is the delimiter. The ampersand (&) also behaves as a delimiter. To use an ampersand as a box character, type two ampersands (Boxchar is ‘&&’).

**Boxclr**

Sets the color or intensity of the exception box. (If you set Boxchar=NO BOX, OMEGAMON II sets Boxclr=NONE.)

On 4-color or noncolor terminals the value can be:

- **HI** Highlights the message.
- **LO** Does not highlight the message.
- **DEFAULT** Uses the value of the default field on the Set Display Options screen.

On 7-color terminals the value can be:

- **RE** Sets the box red.
- **BL** Sets the box blue.
- **YE** Sets the box yellow.
- **PI** Sets the box pink.
- **GR** Sets the box green.
- **TU** Sets the box turquoise.
- **WH** Sets the box white.
- **DEFAULT** Uses the value of the default field on the Set Display Options screen.

Boxclr can also be set to the variables Clr1 through Clr7. They are associated with the colors listed above and follow the same order. To set these values, see the Set Display Options screen.

**Boxattr**

For 7-color terminals, sets an additional highlight attribute (with extended color support) for the box. (If you set Boxchar at NO BOX, OMEGAMON II sets Boxattr at NONE.) It can be one of the following:

- **BLINK** Turns on blinking for the exception.
- **RVRS** Displays message in reverse video.
- **UNDR** Underscores message.
- **NONE** Uses the default extended highlight attributes.

**Note:** If you do not set color and highlighting attributes for the box, OMEGAMON II uses those that you set for the exception.
Threshold Parameters

Threshold

Exception threshold. For exceptions that monitor an action, not a value, this setting is N/A.

Display

Sets the exception message display color or intensity.

The variables $Clr1$ through $Clr7$ specify the exception display color. Set the associated values with the Set Display Options screen.

On terminals that do use extended color support (set with the XACB Display Options field on the Set Display Options screen), the color codes are:

- **RE**: Sets message red.
- **BL**: Sets message blue.
- **YE**: Sets message yellow.
- **PI**: Sets message pink.
- **GR**: Sets message green.
- **TU**: Sets message turquoise.
- **WH**: Sets message white.
- **NONE**: Specifies the hardware default colors.

On terminals that do not use extended color support, the intensity can be:

- **HI**: Highlights the message.
- **LO**: Does not highlight the message.

Attribute

For 7-color terminals, sets an extended highlight attribute (with extended color support) for the exception. It can be one of the following:

- **BLINK**: Turns on blinking for the exception.
- **RVRS**: Displays message in reverse video.
- **UNDR**: Underscores message.
- **NONE**: Uses the default extended highlight attributes.

Cycle Parameters

**ExNcyc**

Sets the frequency for checking the exception at every $n$ OMEGAMON cycles. If this parameter is set to 0 or 1, exception checking will occur during every OMEGAMON cycle. If this field is set to a higher number, exception checking will only occur each time the specified number of cycles elapses. The default setting for ExNcyc is 0.

**Stop**

Sets a monitoring limit for an exception to $n$ trips. After the exception trips $n$ times, the exception will not monitor or display it during the current OMEGAMON II session, unless you reset this parameter. The $(m)$ value, which you may not alter, indicates the number of times the exception has already tripped since you last reset the STOP parameter. The default value for STOP is 0, which means that there is no limit to the number of times the exception can be tested and displayed.

**Cumulative**

 Indicates how many times the exception has tripped during the current OMEGAMON II session. You may not alter this value.
XLF Parameters

**Auto**
Controls the status of ASF (automated screen facility) for this exception. Can be ON or OFF.

**Log**
Controls the status of XLF (exception logging facility) for this exception. Can be ON or OFF.

**Limit**
Limits the number of times XLF and/or ASF is invoked if the exception occurs. If you enter 0, no events will be logged. If you enter NONE, the exception will invoke XLF and/or ASF each time the exception occurs. The number that appears in parentheses is the number of invocations remaining before the limit is reached. If Limit is NONE, the parenthetical value does not appear, because there is no limit to the number of invocations.

**Repeat**
Specifies that the exception is to be logged each time the PERSIST threshold is reached (YES), or that it is to be logged only the first time the PERSIST threshold is reached (NO).

**Persist**
Specifies the number of OMEGAMON II cycles during which the exception must trip before XLF or ASF logs the exception and/or detail screen.

**SS**
The name of the screen that you want ASF to log when the exception trips. The following screens have been predefined for this purpose:

- **ZCILOG** Details about the CICS exceptions.
- **ZIMLOG** Details about IMS exceptions.
- **ZSYLOG** Details about system exceptions.
- **ZTHLOG** Details about thread exceptions.

You can customize and create your own screens for this purpose. You can also chain screens together. For screen customization commands, “OMEGAMON Commands” on page 359, particularly .FGO, .SGO, and .RTN.

This parameter may first appear on your screen as **SS**. You must change the parameter to **SL** in order for the logging to occur properly.
Exception Rules
The following fields appear at the bottom of the screen when you select a THREAD type exception:

**FUNCTION**
Use this field to tell OMEGAMON II what you want to accomplish. Enter one of the values described below, followed by a rule number in parentheses.

- **Add**
  Use to add a new rule or (with Del) to change the order of existing rules. For example, if you enter Add(03), a new rule will be created after rule 2, and all the following rules will be renumbered.

- **Del**
  Use to delete a rule. For example, if you enter Del(05), rule 5 will be deleted, and all the following rules will be renumbered.

- **Dis**
  Use to display the rules. Specifying a rule number, for example, DIS(12), allows you to access a particular rule quickly, without using the scroll key. You can also use an asterisk instead of a rule number, for example DIS(*), to display all rules for the exception.

  Once rules are displayed, you can change the contents of any field.

To change the order of existing rules, you must use Add to place the rule where you want it and Del to remove the rule from its previous position.

**Note:** _OMEGAMON II evaluates these rules in numeric order (that is, rule 1, then 2, and so on). Therefore, you must make the first rule the most specific and the last rule the most general or inclusive._

**RULE**
The rule number.

Use the following rule parameters to specify the conditions under which you want each exception to trip or to be excluded.

**PLAN**
The plan name(s) for which this exception will trip.

**AUTHID**
The authorization ID for which this exception will trip.

**CONNTYPE**
The connection type for which this exception will trip. Possible values:
- Batch
- CICS
- Dist(ributed)
- IMS
- TSO
- Utility

**CICSTRAN**
The CICS transaction ID for which this exception will trip.
CONNTYPE=CICS must be specified in order for this field to be specified.

**CICSCONN**
The CICS task name (job name) for which this exception will trip.
CONNTYPE=CICS must be specified in order for this field to be specified.
Set Exception Analysis Options

**PSBNAME**
The IMS PSB name for which this exception will trip.
CONNTYPE=IMS must be specified in order for this field to be specified.

**IMSID**
The IMS subsystem name for which this exception will trip.
CONNTYPE=IMS must be specified in order for this field to be specified.

**PACKDBRM**
The name of the package or DBRM for which this exception will trip.

**PAKCOLID**
The name of the collection for which this exception will trip.

**CORRID**
The name of the correlation ID for which this exception will trip.

**REQLOC**
The name of the requesting location for which this exception will trip.

**THRDTYPE**
The number from the following list for which this exception will trip:
- 1 - normal threads
- 2 - allied distributed threads
- 3 - command threads
- 4 - distributed database access threads
- 5 - INDOUBT threads
- 6 - parallel task threads
- 8 - system threads

**THRESHOLD**
The threshold that the exception is to use. This value will override the value set with the XACB command.

**EXCLUDE**
Specifies whether or not to exclude the specified criteria from exception analysis reporting.

- **YES**
  Exclude all thread exceptions with the specified parameters from exception processing. That is, filter out all exceptions that have these parameters.

- **NO**
  Include all thread exceptions with the specified parameters in exception processing. That is, filter out all exceptions that do not have these parameters.

Masking is allowed on the following fields:
- PLAN
- AUTHID
- CICSTRAN
- CICSCONN
- PSBNAME
- IMSID

Two types of masking are allowed. Generic masks are defined using an asterisk (*). This type of mask is used when the first character or more of the field is desired. A generic mask of ABC* would allow any value for that field that began with the characters ‘ABC’.

The second type of mask is the question mark (?), which serves as a single-character replacement mask. This is used whenever specific positions within a field are to be masked. A single-character replacement mask of MY???PLN would allow for any characters in the place of the question marks. A possible value would be MY_ACT_PLN.
List Profiles

The List Profiles screen gives you the ability to display a list of all screen profiles available for use.

Highlighting

OMEGAMON II does not highlight any fields on the List Profiles screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

The List Profiles screen displays the following field:

PPRF LIST  Lists the installation profile and all user profiles available for use.
Describe a Profile

The Describe a Profile screen gives you the ability to add a single line description to a profile.

Highlighting

OMEGAMON II does not highlight any fields on the Describe a Profile screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

The Describe a Profile screen displays the following field:

**PPRF COMMENT**  Adds a 1-line description to the current profile.

You must save the description in a profile for it to appear on the List Profiles screen. To save a description with a user profile, use the Save New/Altered User Profile screen. To save a description with the installation profile, use the Save New/Altered Installation screen.
Save New/Altered User Profile

You can change the setting of any user profile option at any time during an OMEGAMON II session. OMEGAMON II only uses the changed setting during the current session. If you want to use the changes during another OMEGAMON II session, you must save the profile by using the Save New/Altered User Profile screen.

Highlighting
OMEGAMON II does not highlight any fields on the Save New/Altered User Profile screen.

Navigation
For additional options, use the OMEGAMON II PF keys.

Fields
The Save New/Altered User Profile screen displays the following field:

PPRF SAVE
Saves the specified user profile. To specify a user profile, type a space followed by the profile’s 2-character suffix after PPRF SAVE and press Enter.
You can specify this suffix in the USER= startup parameter to start subsequent sessions.

When you press Enter, OMEGAMON II checks to see if a profile exists with the name specified. If none exists, OMEGAMON II saves the profile with the specified name. If such a profile already exists, OMEGAMON II displays a confirmation screen and asks you if you want to replace the existing profile.

OMEGAMON II saves the profile in the rhilev.RKO2PFSV dataset. OMEGAMON II does not allow you to change the default profile (/C) under any circumstances.
Delete User Profile

The Delete User Profile screen gives you the ability to delete a user profile.

Highlighting

OMEGAMON II does not highlight any fields on the Delete User Profile screen.

Navigation

For additional options, use the OMEGAMON II PF keys.

Fields

The Delete User Profile screen displays the following field:

PPRF DELETE

Deletess the specified user profile.

To delete a user profile, type a space followed by the profile’s 2-character suffix after PPRF DELETE and press Enter.

When you press Enter, OMEGAMON II checks to see if a profile exists with the name specified. If a profile exists with the name specified, OMEGAMON II asks you to confirm the delete request. If no profile exists with the specified name, OMEGAMON II displays a message telling you so. OMEGAMON II does not allow you to delete the default profile (/C) under any circumstances.

You can delete a profile other than the default at any time. Deleting a profile does not affect active sessions that were started with the deleted profile.
You can change the setting of the installation profile option at any time during an OMEGAMON II session. OMEGAMON II only uses the changed setting during the current session. If you want to use the changes again during another OMEGAMON II session, you must save the profile by using the Save New/Altered Installation Profile screen.

**Highlighting**

OMEGAMON II does not highlight any fields on the Save New/Altered Installation Profile screen.

**Navigation**

For additional options, use the OMEGAMON II PF keys.

**Fields**

The Save New/Altered Installation Profile screen displays the following field:

**IPRF SAVE**

Saves the installation profile.

When you space over the comment character and press Enter, OMEGAMON II displays a confirmation screen and asks you if you want to save the installation profile. OMEGAMON II does not allow you to change the default profile (/C) under any circumstances.
Delete Installation Profile

The Delete Installation Profile screen gives you the ability to delete the installation profile.

Highlighting

OMEGAMON II does not highlight any fields on the Delete Installation Profile screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

The Delete Installation Profile screen displays the following field:

**IPRF DELETE**  Deletes the installation profile.

When you space over the comment character and press Enter, OMEGAMON II asks you to confirm that you want to delete the installation profile. OMEGAMON II does not allow you to delete the default profile (/C) under any circumstances.

You can delete a profile other than the default at any time. Deleting a profile does not affect active sessions that were started with the deleted profile.
The Dynamic Profile Update Facility lets you dynamically import and export individual OMEGAMON II profiles to and from a partitioned dataset by creating import and export dialogs that are invoked externally through MVS.

Following are the instructions for using the import and export dialogs:

- Invoke KD2EXP and KD2IMP by using the MVS Modify command.
- Use KD2EXP to export a profile to a partitioned dataset and KD2IMP to import a profile from a partitioned dataset.
- When you export a profile, its data is written in a standard format to a partitioned dataset member.
- The partitioned dataset should be allocated as variable blocked, LRECL of 3000, with an appropriate number of directory blocks.
- Make sure OMIIDB2, the OMEGAMON II for DB2 started task name, has write authority to the partitioned dataset.
- Importing reverses the above process, and recreates a profile based on the exported information.

The MVS Modify command for exporting a profile is as follows:

```
/F OMIIDB2,NTD KD2EXP 'PDSNAME MEMBER PROFILE'
```

Where `PDSNAME` is the name of the target partitioned dataset name, `MEMBER` is the target partitioned dataset member, and `PROFILE` is the source profile.

The MVS Modify command for importing a profile is as follows:

```
/F OMIIDB2,NTD KD2IMP 'PDSNAME MEMBER PROFILE'
```

Where `PDSNAME` is the name of the source partitioned dataset name, `MEMBER` is the source partitioned dataset member, and `PROFILE` is the target profile.
Exception Logging Menu

The Exception Logging Menu provides navigation options to screens on which you can set printer and routing options for XLF and ASF. In addition, this menu includes selections that turn logging on and off and cause the logs to be printed. (These selections do not navigate to other screens, but a message will appear on the menu to inform you that the action you requested has been performed.)

Highlighting

OMEGAMON II does not highlight any fields on the Exception Logging Menu.

Navigation

For additional options

- choose one of the options from the menu
- use the OMEGAMON II PF keys

Fields

The Exception Logging Menu does not include any output fields. It displays navigation options to other screens, and it displays messages when appropriate. (That is, options B, C, D, F, G, and H initiate the specified action and display a confirming message, such as EXCEPTION LOGGING FACILITY IS ON.)
Set XLF Printer and Routing Options

The Set XLF Printer and Routing Options screen allows you to set a number of options that control how the exception logging facility logs exception messages.

**Note:** If you selected option E (ASF Options) from the Exception Logging Menu, a screen very similar to this one appears. The option settings on the Set ASF Printer and Routing Options screen reflect the settings on the Set Printer and Routing Options screen (see page 416.). That is, there are two sets of options: one for exception logging (XLF) and one for all other output logging (including ASF).

<table>
<thead>
<tr>
<th>Setting</th>
<th>Pending</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>.XLFOUT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>copy</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ddnm</td>
<td>(*DYNAMIC)</td>
<td>(*DYNAMIC)</td>
</tr>
<tr>
<td>dstu</td>
<td><em>NONE</em></td>
<td><em>NONE</em></td>
</tr>
<tr>
<td>fold</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>form</td>
<td><em>None</em></td>
<td><em>None</em></td>
</tr>
<tr>
<td>hold</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>id1</td>
<td>'USER01'</td>
<td>'USER01'</td>
</tr>
<tr>
<td>id2</td>
<td>\</td>
<td>\</td>
</tr>
<tr>
<td>id3</td>
<td>\</td>
<td>\</td>
</tr>
<tr>
<td>id4</td>
<td>\</td>
<td>\</td>
</tr>
<tr>
<td>lnct</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>sout</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

---

**Highlighting**

OMEGAMON II does not highlight any fields on the Set XLF Printer and Routing Options screen.

**Navigation**

For additional options, use the OMEGAMON II PF keys.

**Fields**

To modify an option, move the cursor between the name of the setting you want to change and the **Pending** column, type the new value, and press Enter. To save your changes, delete the comment character (\) next to .XLFOUT and press Enter. This releases the current log, moves the **Pending** values to the **Current** column, and reallocates the log using the new values.
Set XLF Printer and Routing Options

Note: When a value appears within parentheses, it means that the field is inactive.

XLFOUT  Prints the current log and leaves it open. OMEGAMON II places a comment character in front of .XLFOUT so that the log is reset only on cycles when you remove the comment character (>).

copy  The number of copies to print.

ddnm  Overrides the standard OMEGAMON II ddname. When ddnm is active, sout and its related parameters (copy, dest, dstu, form, and hold) are inactive. The ddname must be allocated within the O2CI started task JCL.

dest  The destination to receive the report. The default is NONE, which sends the output to the local printer. The device can be a terminal, a node, a remote workstation, a local device or group of devices, or a user ID.

dstu  The destination user ID to receive the report.

fold  Changes lowercase characters to uppercase. The default is YES.

form  The name of the form on which to print. The default is NONE. This means that OMEGAMON II uses the form defined as your installation’s default. If you change NONE to some other value (such as HOLE), you can type an asterisk (*) to return to NONE.

hold  Specifies that the output be placed in the hold queue. The default is NO.

id1  Requests separator pages and page headers that identify output from different OMEGAMON II sessions.

id2  Defines up to 16 characters to appear on the left of the separator page, justified below the ID1 heading. ID1 must be set to use ID2.

id3  Defines up to 16 characters to appear centered on the separator page, below the ID1 heading. ID1 must be set to use ID3.

id4  Defines up to 16 characters to appear on the right of the separator page, justified below the ID1 heading. ID1 must be set to use ID4.

lnct  Sets the XLFLOG file line count. The default is 60 lines.

sout  Specifies the SYSOUT class for the output.
Set DB2/IRLM Messages that MSGE Exception Monitors

The Set DB2/IRLM Messages that MSGE Exception Monitors screen allows you to specify the DB2 and IRLM messages that the MSGE exception monitors.

Highlighting

OMEGAMON II does not highlight any fields on the Set DB2/IRLM Messages that MSGE Exception Monitors screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

The Set DB2/IRLM Messages that MSGE Exception Monitors screen displays the following fields:

XMSG

The lines below XMSG define the IDs of the DB2 and IRLM messages that OMEGAMON II exception analysis is tracking.
Set DB2/IRLM Messages that MSGE Exception Monitors

**Add**
Type the ID of an additional DB2 or IRLM message that you want OMEGAMON II exception analysis to track, and press Enter. You can add more than one ID at a time by typing the IDs on the Add line with a space between them.

*Note:* *If you want to add a group of messages that have the same initial characters, you can save time by entering only those characters. For example, if you enter DSN, XMSG will monitor all messages that begin with DSN.*

**Delete**
Type the ID of a DB2 or IRLM message that you no longer want OMEGAMON II exception analysis to track and press Enter. You can delete more than one ID at a time by typing the IDs on the Delete line with a space between them.

*Note:* *If you want to delete a group of messages that have the same initial characters, you can save time by entering only those characters. For example, if you enter DSN, XMSG will no longer monitor messages that begin with DSN.*
Introduction

OMEGAMON II allows you to view historical statistics trace information online. The default near-term historical feature stores statistical data about recent DB2 activity, up to 96 intervals' worth of data (including the current interval).

For example, if you select a report interval of one hour, OMEGAMON II stores 96 hours of data at a time. When all the interval buckets are full, OMEGAMON II deletes the data in the oldest bucket in order to continue saving data.

If you specify the MAXHOURS field in CICAT, the number of intervals equals the number of intervals per hour multiplied by the number of hours. For example, if you select four intervals per hour (15 minutes) and MAXHOURS=100, then the number of intervals is 400.

Note: The online historical collector must be running for this function to display near-term historical data. See the OMEGAMON II for DB2 Historical Reporting Guide for more information about the collector. For instructions on starting the collector, see the OMEGAMON II for DB2 Configuration and Customization Guide.

There are two screens for each type (for example, buffer pool) of near-term historical data: one screen provides some information for all the report intervals in storage, while the other screen allows you to zoom in on one interval at a time for detailed information.

Near-term history is stored in main memory, so it is available to all OMEGAMON II sessions as long as the online historical collector is running. If the collector is stopped and restarted, the near-term historical buckets will be empty and ready to begin saving data again.

Besides near-term historical information, this menu path allows you to access information about the online collector. One screen displays the current collection options (for example, collection interval and data storage selections). The other screen provides information about the data that has been collected since the collector was started.

OMEGAMON II provides online historical information through a series of screens and online near-term thread history information through a series of screens.
<table>
<thead>
<tr>
<th>Thread History Resource Limit Statistics</th>
<th>566</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread History Distributed Activity</td>
<td>568</td>
</tr>
<tr>
<td>Thread History Package Summary</td>
<td>572</td>
</tr>
<tr>
<td>Thread History Package Detail</td>
<td>575</td>
</tr>
<tr>
<td>Thread History Sort and Scan Activity</td>
<td>578</td>
</tr>
<tr>
<td>Thread History Group Buffer Pool Activity</td>
<td>581</td>
</tr>
<tr>
<td>Thread History Package Detail</td>
<td>584</td>
</tr>
<tr>
<td>Thread History Parallel Task</td>
<td>587</td>
</tr>
</tbody>
</table>
The Online Historical Information Menu provides access to screens that display information about near-term statistics, near-term thread history, and historical data collection.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>STATISTICS ............. Near-term historical statistics reports</td>
</tr>
<tr>
<td>B</td>
<td>THREAD HISTORY......... Near-term thread history information</td>
</tr>
<tr>
<td>C</td>
<td>COLLECTOR INFORMATION .. Online historical collector information</td>
</tr>
</tbody>
</table>

**Highlighting**

OMEGAMON II does not highlight any fields on the Online Historical Information Menu.

**Navigation**

For additional options

- choose one of the options from the menu
- use the OMEGAMON II PF keys

**Fields**

The Online Historical Information Menu does not display any output fields. It displays navigation options to other screens. The following is a short description of the navigation options available from the Online Historical Information Menu:

- **Statistics**: Provides access to screens that display near-term historical statistics information.
- **Thread History**: Provides access to screens that display near-term thread history information.
- **Collector Information**: Provides access to the screen that displays the current online data collection specifications and the screen that displays information about the records that have been collected.
Subsystem Support Manager Statistics Summary by Report Interval

The Subsystem Support Manager Statistics Summary by Report Interval screen provides an overview of the DB2 activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

- For additional information about a report interval, move the cursor to the desired line and press the zoom key (PF11). (Each date/time displayed reflects the end of an interval.)
- For related topics, choose one of the options at the top of the screen
- For other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Create Thread/Minute**: The number of successful create thread requests per minute.
- **Total Commit/Minute**: The number of commit requests per minute.
- **Total Commits**: Includes read-only, single-phase, and phase 2 commit requests.
Abort Reqs  The number of events that resulted in successfully backing out a unit of recovery.

Queued at Cthread  The number of create thread requests that had to wait because no thread was available.

Indoubt Threads  The number of indoubt threads. A unit of recovery (thread) goes indoubt when a failure occurs between commit phase 1 and commit phase 2.

EOT+EOM Abends  The total number of end-of-task and end-of-memory abends.
Subsystem Support Manager Statistics Detail

The Subsystem Support Manager Statistics Detail screen allows you to view detailed information about DB2 activity during a specified report interval. The screen includes statistics related to create thread, signon, commit, and abnormal termination activity.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option screen. Possible values:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong> Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong> Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
</tbody>
</table>

For each field described below, two statistics are provided:
- Interval quantity, which reflects the amount of activity that occurred during the interval
- Rate per minute
Also note that the /MINUTE column heading includes a count of the number of minutes that made up the interval.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Requests</td>
<td>Successful connections to DB2 from an allied address space.</td>
</tr>
<tr>
<td>Signon Requests</td>
<td>Successful requests to identify a new user for IMS or CICS. Thread signon processing is applicable only in CICS-DB2 and IMS-DB2 attachment environments.</td>
</tr>
<tr>
<td>Create Thread Requests</td>
<td>Successful create thread requests.</td>
</tr>
<tr>
<td>Create Thread Waits</td>
<td>Create thread requests that had to wait because no thread was available.</td>
</tr>
<tr>
<td>Terminate Thread Requests</td>
<td>Successful thread terminations.</td>
</tr>
<tr>
<td>Single Phase Commit Requests</td>
<td>Successful commit requests that took place in a single-phase commit environment, for example, TSO.</td>
</tr>
<tr>
<td>Commit Phase 1 Requests</td>
<td>Commit phase 1 requests in a two-phase commit environment, for example, CICS and IMS.</td>
</tr>
<tr>
<td>Commit Phase 2 Requests</td>
<td>Commit phase 2 requests in a two-phase commit environment, for example, CICS and IMS.</td>
</tr>
<tr>
<td>Abort Requests</td>
<td>Events that resulted in successfully backing out a unit of recovery.</td>
</tr>
<tr>
<td>Total Commit Requests</td>
<td>Includes single-phase, read-only, and phase 2 commit requests.</td>
</tr>
<tr>
<td>Indoubt Threads</td>
<td>The number of indoubt threads. A thread goes indoubt when a failure occurs between commit phase 1 and commit phase 2.</td>
</tr>
<tr>
<td>Indoubts Resolved</td>
<td>Successful resolutions, either automatic or manual, of indoubt threads.</td>
</tr>
<tr>
<td>Abends Detected - End of Task</td>
<td>Tasks that abended while connected to DB2.</td>
</tr>
<tr>
<td>Abends Detected - End of Memory</td>
<td>The number of times a non-DB2 address space was deleted by MVS while connected to DB2.</td>
</tr>
</tbody>
</table>
Bind Statistics Summary by Report Interval

The Bind Statistics Summary by Report Interval screen provides an overview of the bind activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a report interval, move the cursor to the desired line and press the zoom key (PF11). (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Interval**: Provides the date and time that mark the end of the report interval.
- **Auto Bind Attempt**: The number of times an automatic bind was attempted.
- **Auto Bind Success**: The number of times an automatic bind attempt succeeded.
- **Static Bind Attempt**: The number of bind subcommands issued; includes Bind Add and Bind Replace subcommands for plans or packages.
- **Static Bind Success**: The number of bind subcommands that succeeded.
Bind Statistics Summary by Report Interval

Rebind Attempt  The number of attempts to rebind a plan or package.
Rebind Success  The number of successful attempts to rebind a plan or package.
Free Attempt    The number of attempts to free a plan or package.
Free Success    The number of successful attempts to free a plan or package.
**Bind Statistics Detail**

The Bind Statistics Detail screen allows you to view detailed information about bind activity during a specified report interval.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

**Fields**

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collection Interval</strong></td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td><strong>Start</strong></td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td><strong>Report Interval</strong></td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td><strong>Combine Level</strong></td>
<td>This field determines the report interval. It is set on the Historical Report Option screen. Possible values:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong> Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong> Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td><strong>End</strong></td>
<td>The end time of the interval currently displayed.</td>
</tr>
</tbody>
</table>

For each field described below, four statistics are provided:
- the interval quantity, which reflects the amount of activity that occurred during the interval
- the rate per minute, per thread, and per commit.

Also note that the column headings for the three rate columns include a count in parentheses.
- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

- **Automatic Bind Plan Attempts**: DB2’s attempts to perform an automatic bind of a plan.
- **Automatic Bind Plan Successes**: DB2’s successful attempts to perform an automatic bind of a plan.
- **Automatic Bind Pkg Attempts**: DB2’s attempts to perform an automatic bind of a package.
- **Automatic Bind Pkg Successes**: DB2’s successful attempts to perform an automatic bind of a package.
- **Static Bind Plan Attempts**: Represents the bind plan subcommands issued; includes Bind Add and Bind Replace subcommands.
- **Static Bind Plan Successes**: Represents the bind plan subcommands that succeeded.
- **Static Bind Pkg Attempts**: Represents the bind package subcommands issued; includes Bind Add and Bind Replace subcommands.
- **Static Bind Pkg Successes**: Represents the bind package subcommands that succeeded.
- **Rebind Plan Attempts**: Attempts to rebind a plan.
- **Rebind Plan Successes**: Successful attempts to rebind a plan.
- **Rebind Pkg Attempts**: Attempts to rebind a package.
- **Rebind Pkg Successes**: Successful attempts to rebind a package.
- **Free Plan Attempts**: Attempts to free a plan.
- **Free Plan Successes**: Successful attempts to free a plan.
- **Free Pkg Attempts**: Attempts to free a package.
- **Free Pkg Successes**: Successful attempts to free a package.
- **Plan Allocation Attempts**: The attachment facility’s requests to DB2 to allocate a bound plan for a user.
- **Plan Allocation Successes**: Successful plan allocation attempts.
- **Package Allocation Attempts**: The attachment facility’s requests to DB2 to allocate a bound package for a user.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Package Allocation Successes</strong></td>
<td>Successful package allocation attempts.</td>
</tr>
<tr>
<td><strong>Auth Check Attempts</strong></td>
<td>Authorization checks for all plans.</td>
</tr>
<tr>
<td><strong>Auth Check Successes</strong></td>
<td>Successful authorization checks.</td>
</tr>
<tr>
<td><strong>Auth Check Using Cache</strong></td>
<td>Successful authorization checks that were performed using cache.</td>
</tr>
<tr>
<td><strong>Auth Check Public Authority</strong></td>
<td>Successful authorization checks that were performed based upon execute authority granted to public.</td>
</tr>
<tr>
<td><strong>Test binds (No Plan ID)</strong></td>
<td>Bind subcommands that were issued without a plan ID.</td>
</tr>
</tbody>
</table>
Buffer Pool Statistics Summary by Report Interval

The Buffer Pool Statistics Summary by Report Interval screen provides an overview of the buffer pool activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals, or you can view information about a different buffer pool by entering a buffer pool ID (for example, 1 or 32K) next to HBPS.

Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages in Use</td>
<td>BMTH</td>
<td>The percentage in use has reached the threshold defined.</td>
</tr>
</tbody>
</table>

Navigation

For additional information about
- another buffer pool, enter the buffer pool ID next to HBPS
- a report interval, move the cursor to the desired line and press the zoom key (PF11). (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Interval**: Provides the date and time that mark the end of the report interval.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages in Use</td>
<td>A snapshot value of the current number of nonstealable buffers. A nonstealable buffer is either one which has an outstanding getpage (that is, someone is currently looking at this page), or one which has been updated and not yet written out to DASD.</td>
</tr>
<tr>
<td>Prefetch Requests</td>
<td>The total number of prefetch requests. This is the sum of sequential, list, and dynamic prefetch requests.</td>
</tr>
<tr>
<td>Prefetch Failures</td>
<td>The number of sequential prefetch failures for the buffer pool during the interval. This includes failures that occurred because the SPTH threshold was reached and because the maximum number of concurrent prefetches was reached.</td>
</tr>
<tr>
<td>Getpages/Sync I/O</td>
<td>The ratio of getpage requests to synchronized read I/Os.</td>
</tr>
<tr>
<td>Pages/Write I/O</td>
<td>The ratio of page writes to physical I/Os.</td>
</tr>
<tr>
<td>DMTH</td>
<td>The number of times the data manager threshold was reached.</td>
</tr>
</tbody>
</table>
The Buffer Pool Statistics Detail screen provides detailed near-term historical information about activity in a specified DB2 buffer pool during a specified report interval.

You can view information about a different buffer pool by entering a buffer pool ID (for example, 1 or 32K) next to HBPD.

### Highlighting

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Pages in Use</td>
<td>BXPN</td>
<td>The pages in use exceeded the minimum defined.</td>
</tr>
<tr>
<td></td>
<td>BMAX</td>
<td>The pages in use reached the maximum defined.</td>
</tr>
<tr>
<td></td>
<td>BMTH</td>
<td>The percentage in use has reached the threshold defined.</td>
</tr>
</tbody>
</table>

### Fields

Here are descriptions for some of the fields displayed on this screen, for a specified buffer pool or summarized for all buffer pools:

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the interval currently displayed.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the interval currently displayed.
- **Virtual Buffer Pool Size**: The number of buffers allocated for an active virtual buffer pool.
**Buffer Pool Statistics Detail**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hiperpool Size</strong></td>
<td>The number of buffers allocated for an active hiperpool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>VPOOL Buffers Allocated</strong></td>
<td>The number of virtual buffer pool pages that were allocated at the end of the interval.</td>
</tr>
<tr>
<td><strong>HPOOL Buffers Backed</strong></td>
<td>The number hiperpool pages that were backed by expanded storage at the end of the interval. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>VPOOL Buffers in Use</strong></td>
<td>The number of virtual buffer pool pages that were in use (nonstealable) at the end of the interval.</td>
</tr>
<tr>
<td><strong>Castout Attribute</strong></td>
<td>The castout attribute of the hiperspaces used to back the hiperpool: Note: Hiperpools are not supported in DB2 Version 8.1.</td>
</tr>
<tr>
<td>YES</td>
<td>Allows MVS to discard data cached in the hiperpool when a shortage of expanded storage arises.</td>
</tr>
<tr>
<td>NO</td>
<td>Prevents MVS from discarding data cached in the hiperpool unless expanded storage pages are reconfigured out of the system.</td>
</tr>
<tr>
<td><strong>VP Sequential Thresh</strong></td>
<td>Sequential steal threshold for the virtual buffer pool VPSSEQT. The percentage of the virtual buffer pool that may be occupied by sequentially accessed pages. If set to zero, prefetch is disabled.</td>
</tr>
<tr>
<td><strong>HP Sequential Thresh</strong></td>
<td>Sequential steal threshold for the hiperpool HPSEQT. The percentage of the virtual buffer pool that may be occupied by sequentially accessed pages. If set to zero, prefetch is disabled. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Deferred Write Thresh</strong></td>
<td>Deferred write threshold for the hiperpool DWQT. Write operations are scheduled when the percentage of unavailable pages in the virtual buffer pool exceeds this threshold in order to decrease the unavailable pages to 10% below the threshold. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Vert Deferred Write Thresh</strong></td>
<td>Vertical deferred write threshold for the virtual buffer pool VDWQT. The percentage of the buffer pool that may be occupied by updated pages from a single dataset.</td>
</tr>
<tr>
<td><strong>VP Parallel Seq Thresh</strong></td>
<td>Parallel I/O sequential threshold VPPSEQT. This threshold determines how much of the virtual buffer pool may be used for parallel I/O operations. It is expressed as a percentage of VPSEQT. If set to zero, I/O parallelism is disabled.</td>
</tr>
<tr>
<td><strong>Getpages per Sync I/O</strong></td>
<td>The ratio of getpage requests to read I/Os.</td>
</tr>
<tr>
<td><strong>Pages Written per Write I/O</strong></td>
<td>The ratio of page writes to physical I/Os.</td>
</tr>
<tr>
<td><strong>Prefetch per I/O</strong></td>
<td>The ratio of prefetch requests to physical I/Os.</td>
</tr>
<tr>
<td><strong>Pages Read per Prefetch</strong></td>
<td>The ratio of pages read by prefetch processing to total prefetch requests. This includes both sequential and list prefetch.</td>
</tr>
<tr>
<td><strong>Seq Prefetch per I/O</strong></td>
<td>The ratio of pages read by sequential prefetch to sequential prefetch I/O.</td>
</tr>
</tbody>
</table>
**Buffer Pool Statistics Detail**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages Read per Seq Prefetch</td>
<td>The ratio of pages read by sequential prefetch requests to sequential prefetch requests.</td>
</tr>
<tr>
<td>List Prefetch per I/O</td>
<td>The ratio of list prefetch requests to list prefetch I/Os.</td>
</tr>
<tr>
<td>Pages Read per List Prefetch</td>
<td>The ratio of pages read by list prefetch to list prefetch requests.</td>
</tr>
<tr>
<td>Dyn Prefetch per I/O</td>
<td>The ratio of dynamic prefetch request to dynamic prefetch I/Os.</td>
</tr>
<tr>
<td>Pages Read per Dyn Prefetch</td>
<td>The ratio of pages read by dynamic prefetch to dynamic prefetch request.</td>
</tr>
<tr>
<td>Max Concur Prefetch I/O</td>
<td>The highest number of concurrent prefetch I/O streams that were allocated to support I/O parallelism.</td>
</tr>
<tr>
<td>Workfile Maximum</td>
<td>The maximum number of workfiles that have been allocated during sort/merge processing.</td>
</tr>
<tr>
<td>BP Hit % - Random</td>
<td>The percentage of times that DB2 went to get a page with a random request and it was already in the buffer pool. A DASD read was not required for the GETPAGE.</td>
</tr>
<tr>
<td>BP Hit % - Sequential</td>
<td>The percentage of times that DB2 went to get a page with a sequential request and it was already in the buffer pool. A DASD read was not required for the GETPAGE.</td>
</tr>
<tr>
<td>HP Hit Percentage</td>
<td>The hiperpool hit percentage. The percentage of times that DB2 went to the hiperpool for a page and it was there. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td>HP Read-to-Write Percentage</td>
<td>The hiperpool read-to-write percentage. It is calculated from the ratio of the number of hiperpool reads, to the sum of the number of hiperpool reads and hiperpool writes. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
</tbody>
</table>

For each field described below, four statistics are provided:

- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per minute
- rate per thread
- rate per commit

Also note that the column headings for the three rate columns include a count in parentheses.

- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getpage Requests</td>
<td>Getpage request operations for the buffer pool during the interval.</td>
</tr>
<tr>
<td>Getpage Requests - Sequential</td>
<td>Number of getpage requests issued by sequential access requestors.</td>
</tr>
<tr>
<td>Getpage Requests - Random</td>
<td>Number of getpage requests issued by random access requestors.</td>
</tr>
<tr>
<td>Getpage Failed - VPOOL Full</td>
<td>Number of getpage failures due to unavailable buffers because the virtual buffer pool was full.</td>
</tr>
<tr>
<td>Getpage Failed - Cond Request</td>
<td>Number of conditional getpage requests that could not be satisfied for this buffer pool. A conditional getpage is used with parallel I/O processing only.</td>
</tr>
<tr>
<td>Sync Read I/O Operations</td>
<td>Synchronous read operations done by DB2 during the interval.</td>
</tr>
<tr>
<td>Sync Read I/Os - Sequential</td>
<td>Number of synchronous read I/O operations performed by sequential requests.</td>
</tr>
<tr>
<td>Sync Read I/Os - Random</td>
<td>Number of synchronous read I/O operations performed by random requests.</td>
</tr>
<tr>
<td>Page-in Required for Read I/O</td>
<td>Number of page-ins required for read I/O.</td>
</tr>
<tr>
<td>Pages Read via Seq Prefetch</td>
<td>Pages read as a result of sequential prefetch requests.</td>
</tr>
<tr>
<td>Seq Prefetch I/O Operations</td>
<td>Number of asynchronous read I/Os caused by sequential prefetch.</td>
</tr>
<tr>
<td>Sequential Prefetch Requests</td>
<td>Sequential prefetch requests for the buffer pool during the interval.</td>
</tr>
<tr>
<td>Pages Read via List Prefetch</td>
<td>Number of pages read because of list prefetch.</td>
</tr>
<tr>
<td>List Prefetch I/O Operations</td>
<td>List prefetch requests for the buffer pool during the interval.</td>
</tr>
<tr>
<td>List Prefetch Requests</td>
<td>Number of asynchronous read I/Os caused by list prefetch.</td>
</tr>
<tr>
<td>Dyn Prefetch I/O Operations</td>
<td>Number of asynchronous read I/Os caused by dynamic prefetch.</td>
</tr>
<tr>
<td>Dyn Prefetch Requests</td>
<td>Dynamic prefetch requests for the buffer pool.</td>
</tr>
</tbody>
</table>
Prefetch Failed - No Buffer
Failures of sequential prefetch because the sequential prefetch threshold (SPTH) was reached.

Prefetch Failed - No Engine
Failures of sequential prefetch because the maximum number of concurrent sequential prefetches was reached. (You cannot change this maximum value.)

HP Pages Read Sync
Number of pages moved from the hiperpool to the virtual buffer under the control of a synchronous task. (Hiperpools are not supported in DB2 Version 8.1)

HP Pages Read Async - No ADM
Number of pages moved from the hiperpool to the virtual buffer pool under the control of an asynchronous task, such as prefetch. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1)

HP Pages Read Async - ADM
Number of pages moved from the hiperpool to the virtual buffer pool by the Asynchronous Data Mover Facility for an asynchronous task such as prefetch. (Hiperpools are not supported in DB2 Version 8.1)

HP Read Failed - No ADM
Number of unsuccessful reads from the hiperpool, synchronous and asynchronous. This happens when a page was found in the hiperpool but backing expanded storage was stolen. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1)

HP Read Failed - ADM
Number of reads from the hiperpool that failed using the Asynchronous Data Mover Facility because the backing expanded storage was stolen or some other error occurred.

Parallel Group Requests
Number of requests made for processing queries in parallel.

Prefetch I/O Streams Reduced
Number of requested prefetch I/O streams that were denied because of a buffer pool shortage. This applies only for nonworkfile pagesets for queries that are processed in parallel.

I/O Parallelism Downgraded
Number of times the requested number of buffers to allow a parallel group to run to the planned degree could not be allocated because of a buffer pool shortage.

Prefetch Quan Reduced to 1/2
Number of time the sequential prefetch quantity was reduced from normal to one-half of normal. This is done to continue to allow execution concurrently with parallel I/O.

Prefetch Quan Reduced to 1/4
Number of times the sequential prefetch quantity was reduced from one-half to one-quarter normal.

Pages Updated
Updates to pages in the buffer pool during the interval.

Pages Written
Buffer pool pages written to DASD during the interval.

Page-in Required for Write I/O
Number of page-ins required for write I/O operations.

Write I/O Operations
Writes performed by media manager for both synchronous and asynchronous I/O.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Immediate (Sync) Writes** | Immediate writes to DASD during the interval. This value is incremented when 97.5% of the buffer pool pages are in use. In addition, DB2 may flag buffer pool pages for immediate write during checkpoint processing and when a database is stopped.  
*Note:* Consider the value of DMTH (Data Manager Threshold) when interpreting this value. If DMTH is zero, this value is probably insignificant. |
| **Write Engine Not Available** | Writes that were deferred because DB2 reached its maximum number of concurrent writes. |
| **HP Pages Written Sync** | Number of pages moved synchronously from the virtual buffer pool to the hiperpool. Pages accessed by parallel I/O queries are not cached in the hiperpool. (Hiperpools are not supported in DB2 Version 8.1) |
| **HP Pages Written Async - No ADM** | Number of pages moved from the virtual buffer pool to the hiperpool under the control of an asynchronous task such as prefetch. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1) |
| **HP Pages Written Async - ADM** | Number of pages moved to the virtual buffer pool from the hiperpool by the Asynchronous Data Mover Facility for an asynchronous task such as prefetch. (Hiperpools are not supported in DB2 Version 8.1) |
| **HP Write Failed - No ADM** | Number of unsuccessful writes to the hiperpool, synchronous and asynchronous, because of a shortage of expanded storage. This count does not include pages moved by the Asynchronous Data Mover Facility. (Hiperpools are not supported in DB2 Version 8.1) |
| **HP Write Failed - ADM** | Number of writes to the hiperpool that failed using the Asynchronous Data Mover Facility because the backing expanded storage was stolen or some other error occurred. (Hiperpools are not supported in DB2 Version 8.1) |
| **Vert Def Write Threshold Reached** | Number of times the vertical deferred write threshold was reached. |
| **Deferred Write Threshold Reached** | Deferred write threshold (DWTH) was reached. This occurs when DB2 uses 50% of the buffer pool minimum value, or if a dataset has updated 10% of the pages or 64 pages, whichever is greater. At this threshold, DB2 forces writes in an effort to free pool space. |
| **Data Manager Threshold Reached** | Data manager threshold (DMTH) was reached. This occurs when DB2 uses 95% of the buffer pool minimum value and begins to operate at the row level rather than the page level. When this occurs, CPU usage increases greatly. |
| **Successful VPOOL Expand/Contract** | Number of successful virtual buffer pool expansions or contractions because of the ALTER BUFFERPOOL command. |
| **Successful HPOOL Expand/Contract** | Number of successful hiperpool expansions or contractions because of the ALTER BUFFERPOOL command. (Hiperpools are not supported in DB2 Version 8.1) |
| **VPOOL or HPOOL Expand Failed** | Number of virtual buffer pool or hiperpool expansion failures. (Hiperpools are not supported in DB2 Version 8.1) |
### Buffer Pool Statistics Detail

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Successful Dataset Opens</strong></td>
<td>Dataset open operations that were successful during the interval.</td>
</tr>
<tr>
<td><strong>DFHSM Recall</strong></td>
<td>Attempts to access datasets that were migrated by DFHSM.</td>
</tr>
<tr>
<td><strong>DFHSM Recall Timeouts</strong></td>
<td>Unsuccessful attempts to recall datasets because the timeout threshold</td>
</tr>
<tr>
<td></td>
<td>(DSNZPARM RECALLD) was exceeded.</td>
</tr>
<tr>
<td><strong>Sort/Merge Passes</strong></td>
<td>Number of merge passes for DB2 sort/merge processing.</td>
</tr>
<tr>
<td><strong>Sort/Merge Workfile Req</strong></td>
<td>Number of workfiles requested during sort/merge processing.</td>
</tr>
<tr>
<td><strong>Sort/Merge Workfile Requests Denied</strong></td>
<td>Number of requests for workfiles denied during sort/merge processing due to insufficient buffer resources.</td>
</tr>
<tr>
<td><strong>Sort/Merge Pass - Buff Short</strong></td>
<td>Number of times that sort/merge could not efficiently perform due to</td>
</tr>
<tr>
<td></td>
<td>insufficient buffer resources. This field is incremented when the number of</td>
</tr>
<tr>
<td></td>
<td>workfiles allowed is less than the number of workfiles requested.</td>
</tr>
<tr>
<td><strong>Workfile Prefetch Disabled</strong></td>
<td>Number of times workfile prefetch was not scheduled because the prefetch</td>
</tr>
<tr>
<td></td>
<td>quantity was zero.</td>
</tr>
<tr>
<td><strong>Workfile Create Failed - No buff</strong></td>
<td>Number of times a workfile was not created due to insufficient buffers</td>
</tr>
<tr>
<td></td>
<td>(MVS/XA) only.</td>
</tr>
<tr>
<td><strong>Destructive Read Requests</strong></td>
<td>Number of pages requested for destructive read processing.</td>
</tr>
<tr>
<td><strong>Destructive Read Page Dequeue</strong></td>
<td>Number of pages dequeued for destructive read processing.</td>
</tr>
</tbody>
</table>
Group Buffer Pool Statistics Detail

The Group Buffer Pool Statistics Detail screen displays detailed near-term historical information about activity in a specified DB2 group buffer pool during a specified report interval. This screen is available only for DB2 Version 4 and above when running in a data sharing environment.

You can view information about a different group buffer pool by entering a buffer pool ID next to HGBD.

Navigation

- related topics, choose one of the options from the menu
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the first interval in this display.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option panel. Possible values are:</td>
</tr>
<tr>
<td></td>
<td>HOURLY Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td>NONE Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the last interval in this display.</td>
</tr>
<tr>
<td>Allocated Size</td>
<td>The allocated size of the group buffer pool in 4KB blocks.</td>
</tr>
<tr>
<td>Checkpoint Interval</td>
<td>The checkpoint interval for the group buffer pool, in minutes.</td>
</tr>
<tr>
<td>GBP Castout Threshold</td>
<td>Group buffer pool castout threshold. When the number of changed pages in the group buffer pool exceeds this threshold, castout will be initiated. You can change this value via the GBPOOLT parameter on the ALTER GROUPBUFFERPOOL command.</td>
</tr>
<tr>
<td>Castout Class</td>
<td>Group buffer pool castout class threshold. When the number of changed pages for a particular castout class exceeds this threshold, castout will be initiated. You can change this value via the CLASST parameter on the ALTER GROUPBUFFERPOOL command.</td>
</tr>
<tr>
<td>Threshold</td>
<td>The current ratio of directory entries to data pages.</td>
</tr>
</tbody>
</table>

Current Directory/Data Ratio
Pending Directory/Data Ratio

The pending ratio of directory entries to data pages. This value will be different from the current ratio if an ALTER GROUPBUFFERPOOL command has been issued with a new value for the RATIO parameter. The change will not take effect until the next time the group buffer pool is allocated.

Number of directory entries

The actual number of allocated directory entries.

Number of data pages

The actual number of allocated data pages.

Read Hit %

The percentage of all reads to the group buffer pool for which the needed data was found and returned to the member.

For each field described below, four statistics are provided:

- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per second
- rate per thread
- rate per commit

Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<p>| Reads - Cross Invalidation: Data Returned | The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where the data was found and returned to the member. |
| Reads - Cross Invalidation: Data not in GBP-R/W Interest | The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where the data was not found in the group buffer pool and the member had to go to DASD to read the page, and other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist. |
| Reads - Cross Invalidation: Data not in GBP-No R/W Int | The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where the data was not found in the group buffer pool and the member had to go to DASD to read the page, and no other member had read/write interest in the pageset, so DB2 did not have to register the page. |
| Reads - Page Not Found: Data Returned | The number of reads to the group buffer pool required because the page was not in the member's buffer pool where the data was found and returned to the member. |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reads - Page Not Found:</strong></td>
<td><strong>Data not in GBP-R/W Int</strong>&lt;br&gt;The number of reads to the group buffer pool required because the page was not in the member’s buffer pool, where&lt;br&gt;  - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt;  - other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.</td>
</tr>
<tr>
<td><strong>Reads - Page Not Found:</strong></td>
<td><strong>Data not in GBP-No R/W Int</strong>&lt;br&gt;The number of reads to the group buffer pool required because the page was not in the member’s buffer pool, where&lt;br&gt;  - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt;  - no other member had read/write interest in the pageset, so DB2 did not have to register the page.</td>
</tr>
<tr>
<td><strong>Reads - Prefetch:</strong></td>
<td><strong>Data Returned</strong>&lt;br&gt;The number of reads to the group buffer pool performed for prefetch processing where the data was found and returned to the member.</td>
</tr>
<tr>
<td><strong>Reads - Prefetch:</strong></td>
<td><strong>Data not in GBP-R/W Int</strong>&lt;br&gt;The number of reads to the group buffer pool performed for prefetch processing, where&lt;br&gt;  - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt;  - other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.</td>
</tr>
<tr>
<td><strong>Reads - Prefetch:</strong></td>
<td><strong>Data not in GBP-No R/W Int</strong>&lt;br&gt;The number of reads to the group buffer pool performed for prefetch processing, where&lt;br&gt;  - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt;  - no other member had read/write interest in the pageset, so DB2 did not have to register the page.</td>
</tr>
<tr>
<td><strong>Read Failed - No Storage</strong></td>
<td>The number of group buffer pool read requests that failed because of a shortage of coupling facility resources.</td>
</tr>
<tr>
<td><strong>Writes - Synchronous:</strong></td>
<td><strong>Changed Pages</strong>&lt;br&gt;The number of changed pages written to the group buffer pool. Pages can be forced out before the application commits if a buffer pool threshold is reached, or when P-lock negotiation forces the pages on the vertical deferred write queue to be written to the group buffer pool.</td>
</tr>
<tr>
<td><strong>Writes - Synchronous:</strong></td>
<td><strong>Clean Pages</strong>&lt;br&gt;The number of clean pages written to the group buffer pool. DB2 writes clean pages for pagesets and partitions defined with GBPCACHE ALL.</td>
</tr>
<tr>
<td><strong>Writes - Synchronous:</strong></td>
<td><strong>Changed Pages</strong>&lt;br&gt;The number of changed pages synchronously written to the group buffer pool. Pages can be forced out before the application commits if a buffer pool threshold is reached, or when P-lock negotiation forces the pages on the vertical deferred write queue to be written to the group buffer pool.</td>
</tr>
<tr>
<td><strong>Writes - Synchronous:</strong></td>
<td><strong>Clean Pages</strong>&lt;br&gt;The number of clean pages synchronously written to the group buffer pool. DB2 writes clean pages for pagesets and partitions defined with GBPCACHE ALL.</td>
</tr>
<tr>
<td>Statistic</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Writes - Asynchronous: Changed Pages</td>
<td>The number of changed pages asynchronously written to the group buffer pool. Pages can be forced out before the application commits if a buffer pool threshold is reached, or when P-lock negotiation forces the pages on the vertical deferred write queue to be written to the group buffer pool.</td>
</tr>
<tr>
<td>Writes - Asynchronous: Clean Pages</td>
<td>The number of clean pages asynchronously written to the group buffer pool. DB2 writes clean pages for pagesets and partitions defined with GBPCACHE ALL.</td>
</tr>
<tr>
<td>Write Failed - No Storage</td>
<td>The number of group buffer pool write requests that failed because of a shortage of coupling facility resources.</td>
</tr>
<tr>
<td>Write Engine Not Available</td>
<td>The number of times a write engine was not available to perform a coupling facility write.</td>
</tr>
<tr>
<td>Pages Castout to DASD</td>
<td>The number of pages that this member has castout to DASD from the group buffer pool.</td>
</tr>
<tr>
<td>GBP Castout Threshold Reached</td>
<td>The number of times that castout was initiated because the group buffer pool castout threshold was reached.</td>
</tr>
<tr>
<td>Castout Class Threshold Reached</td>
<td>The number of times that castout was initiated because the castout class threshold was reached.</td>
</tr>
<tr>
<td>Other Requests</td>
<td>The number of other requests.</td>
</tr>
</tbody>
</table>
Group Buffer Pool Statistics Summary by Report Interval

The Group Buffer Pool Statistics Summary by Report Interval screen provides an overview of the group buffer pool activity that was recorded during a series of report intervals. This screen is available only for DB2 Version 4 and above when running in a data sharing environment.

For more detailed statistics about a report interval, move the cursor to the desired line and press the zoom key (PF11). Each date/time displayed reflects the end of an interval. You can also view information about a different buffer pool by entering a buffer pool ID next to HGBS.

Highlighting

OMEGAMON II does not highlight any fields on this panel.

Navigation

For additional information about
- related topics, choose one of the options from the menu
- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the first interval in this display.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option panel. Possible values are:</td>
</tr>
<tr>
<td></td>
<td>HOURLY Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td>NONE Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the last interval in this display.</td>
</tr>
<tr>
<td>Interval</td>
<td>Provides the date and time that mark the end of the report interval.</td>
</tr>
<tr>
<td>Total Reads</td>
<td>The total number of reads to the group buffer pool.</td>
</tr>
<tr>
<td>Read Hit %</td>
<td>The percentage of all reads to the group buffer pool for which the needed data was found and returned to the member.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Pages Not Returned - R/W Int % | The percentage of all reads to the group buffer pool where
- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist. |
| Pages Not Returned - No Int % | The percentage of all reads to the group buffer pool where
- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- no other members had read/write interest in the pageset, so DB2 did not have to register the page. |
| Read/Write Failed           | The number of read or write requests to the group buffer pool that failed because of a lack of storage resources.                                                                                           |
| Total Writes                | The total number of writes to the group buffer pool.                                                                                                                                                       |
| Pages Castout               | The number of pages that this member has castout to DASD from the group buffer pool.                                                                                                                      |
Distributed Data Facility Statistics Summary by Report Interval

The Distributed Data Facility (DDF) Statistics Summary by Report Interval screen provides an overview of the DDF activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a report interval, move the cursor to the desired line and press the zoom key (PF11).
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the first interval in this display.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option screen. Possible values:</td>
</tr>
<tr>
<td></td>
<td>HOURLY Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td>NONE Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the last interval in this display.</td>
</tr>
<tr>
<td>Interval</td>
<td>Provides the date and time that mark the end of the report interval.</td>
</tr>
<tr>
<td># of Rmts</td>
<td>The number of remote DB2s with which the local DB2 communicated during a given interval.</td>
</tr>
<tr>
<td>Total Trans</td>
<td>The total transactions sent and received by the local DB2.</td>
</tr>
<tr>
<td>Total SQL</td>
<td>The total SQL calls sent and received by the local DB2.</td>
</tr>
<tr>
<td>Total Rows</td>
<td>The total rows of data sent and received by the local DB2.</td>
</tr>
<tr>
<td>Total Msgs</td>
<td>The total VTAM messages sent and received by the local DB2.</td>
</tr>
<tr>
<td>Total Bytes</td>
<td>The total bytes sent and received by the local DB2.</td>
</tr>
</tbody>
</table>
**Total Commit**
The total number of commit operations performed. This is the sum of the single-phase and two-phase commits performed.

**Total Abort**
The total number of rollback operations performed. This is the sum of the single-phase rollback operations and two-phase backouts performed.

**Total Conv**
The total conversations sent and received by the local DB2.

**Total ConvQ**
The total number of conversations queued by DDF.
Distributed Data Facility Statistics Detail

The Distributed Data Facility Statistics Detail screen provides detailed near-term historical statistics about DDF activity during a specified report interval, formatted by remote DB2 location.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option screen. Possible values:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong>  Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong>    Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>DDF Send Rate</td>
<td>The rate at which data was sent by DDF (expressed as the number of kilobytes per second).</td>
</tr>
<tr>
<td>DDF Receive Rate</td>
<td>The rate at which data was received by DDF (expressed as the number of kilobytes per second).</td>
</tr>
<tr>
<td>Resync Attempts</td>
<td>The number of resynchronization connects attempted with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Resync Successes</td>
<td>The number of resynchronization connects that succeeded with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Cold Start Connections</td>
<td>The number of Cold Start connections with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.</td>
</tr>
</tbody>
</table>
The following group of fields occurs for each remote DB2 location with which the local DB2 subsystem communicated, either as a requester or a responder, during the report interval. Each sent/received field generates two rows of output; the top row is the sent value, and the bottom row is the received value.

**Remote Statistics**

- **Warm Start Connections**: The number of Warm Start connections with all remote locations. Used only for two-phase commit. This field appears only for DB2 Version 4 and above.
- **DBAT Queued**: Number of times a database access thread had to wait because the maximum number of concurrent DBAT threads (MAXDBAT) was reached.
- **Conversation Dealloc**: The number of conversations deallocated because the ZPARM limit for maximum connected remote threads (both active and inactive) was reached. This field appears only for DB2 Version 4 and above.
- **HWM All DBATs**: The high water mark of inactive and active data base access threads. This field appears only for DB2 Version 4 and above.
- **HWM Active DBATs**: The high water mark of active DB Access threads. If the INACTIVE option is specified, it is possible for this value and the current number of active DBAT threads to exceed MAXDBAT. This occurs because DB2 allows CONNECTs to be processed even if MAXDBAT has been exceeded. After connect processing is complete, if MAXDBAT is still exceeded, then the DBAT is made inactive. This field appears only for DB2 Version 4 and above.
- **HWM Inactive DBATs**: The high water mark of inactive DB Access threads. This field appears only for DB2 Version 4 and above.

- **Remote Location Name**: The name of a remote location with which the local DB2 communicated. The statistics immediately below this field pertain to this location.
- **Conversations Queued**: The number of conversations queued by DDF.
- **Binds for Remote Access**: Number of SQL statements bound for remote access.
- **Message Buffer Rows**: Number of rows in the message buffer if block fetch is being used.
- **Block Mode Switches**: Number of times a switch was made from continuous block mode to limited block mode.
- **Commits/Remote**: The number of commit operations performed with the remote location as coordinator.
- **Rollbacks/Remote**: The number of rollback operations performed with the remote location as coordinator.
- **Indoubts/Remote**: The number of threads that became indoubt with the remote location as coordinator.
- **Tran Sent/Recv**: The number of transactions migrated to and from the remote location.
### Distributed Data Facility Statistics Detail

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Sent/Recv</td>
<td>The number of SQL calls sent to and from the remote location.</td>
</tr>
<tr>
<td>Row Sent/Recv</td>
<td>The number of rows sent to and from the remote location.</td>
</tr>
<tr>
<td>Message Sent/Recv</td>
<td>The number of VTAM messages sent to and from the remote location.</td>
</tr>
<tr>
<td>Byte Sent/Recv</td>
<td>The number of bytes sent to and from the remote location.</td>
</tr>
<tr>
<td>Commit Sent/Recv</td>
<td>The number of commits sent to and from the remote location.</td>
</tr>
<tr>
<td>Abort Sent/Recv</td>
<td>The number of aborts sent to and from the remote location.</td>
</tr>
<tr>
<td>Conv Sent/Recv</td>
<td>The number of conversations sent to and from the remote location.</td>
</tr>
<tr>
<td>Blocks Sent/Recv</td>
<td>Number of blocks sent to and from the remote location, if using block fetch mode.</td>
</tr>
</tbody>
</table>

#### 2-Phase Commit

Each of the following sent/received fields generates two rows of output; the top row is the sent value, and the bottom row is the received value.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare Sent/Recv</td>
<td>The number of prepare requests sent to and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Last Agent Sent/Recv</td>
<td>The number of last agent requests sent to and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Commit Sent/Recv</td>
<td>The number of commit requests sent to the participant and received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Backout Sent/Recv</td>
<td>The number of backout requests sent to the participant received from the coordinator. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Forget Sent/Recv</td>
<td>The number of forget requests sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Commit Resp Sent/Recv</td>
<td>The number of request commit responses sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
<tr>
<td>Backout Resp Sent/Recv</td>
<td>The number of backout responses sent to the coordinator and received from the participant. Used only for 2-phase commit.</td>
</tr>
</tbody>
</table>
The EDM Pool Statistics Summary by Report Interval screen provides an overview of the Environmental Descriptor Manager pool activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

**Highlighting**

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages in Use %</td>
<td>EDMU</td>
<td>The utilization of the EDM pool has reached or exceeded the specified threshold.</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about
- a report interval, move the cursor to the desired line and press the zoom key (PF11). (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Interval**: Provides the date and time that mark the end of the report interval.
- **Pages in Use %**: The percentage of the pages in the EDM pool that were in use during a given interval.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DBD Pages</strong></td>
<td>The number of pages used for database descriptors.</td>
</tr>
<tr>
<td><strong>DBD Load %</strong></td>
<td>The percentage of DBD requests that resulted in DBD loads from DASD.</td>
</tr>
<tr>
<td><strong>CT Pages</strong></td>
<td>The number of pages used for cursor tables.</td>
</tr>
<tr>
<td><strong>CT Load %</strong></td>
<td>The percentage of CT requests that resulted in CT loads from DASD.</td>
</tr>
<tr>
<td><strong>PT Pages</strong></td>
<td>The number of pages used for package tables.</td>
</tr>
<tr>
<td><strong>PT Load %</strong></td>
<td>The percentage of PT requests that resulted in PT loads from DASD.</td>
</tr>
<tr>
<td><strong>DSC Loads</strong></td>
<td>Dynamic SQL caches that had to be loaded from DASD.</td>
</tr>
<tr>
<td><strong>% of DSC Loads into Pool</strong></td>
<td>The percentage of dynamic SQL cache requests that resulted in DSC loads into pool. This value should be kept low.</td>
</tr>
</tbody>
</table>
EDM Pool Statistics Detail

The EDM Pool Statistics Detail screen provides detailed information about the activity in and performance of the Environmental Descriptor Manager pool during a specified report interval.

**Highlighting**

OMEGAMON II highlights some fields on this screen to draw your attention to their current status:

<table>
<thead>
<tr>
<th>Field</th>
<th>Exception</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages In Use</td>
<td>EDMU</td>
<td>The utilization of the EDM pool has reached or exceeded the specified threshold.</td>
</tr>
<tr>
<td>Pct In Use</td>
<td>EDMU</td>
<td>The utilization of the EDM pool has reached or exceeded the specified threshold.</td>
</tr>
</tbody>
</table>

**Navigation**

For additional information about related topics, choose one of the options at the top of the screen.

- other topics, use the OMEGAMON II PF keys

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the interval currently displayed.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the interval currently displayed.
**Pool Usage**

Each of the fields described below has two values: one represents the number of pages dedicated to a type of pool usage, and the other represents the percentage of the EDM pool dedicated to that type of usage. Both figures are based on a snapshot of the data that was taken at the end of the report interval.

- **In Use**
  - The amount of the EDM pool that was in use at the end of the interval.

- **DBDs**
  - The amount of the EDM pool that was in use for database descriptors at the end of the interval.

- **CTs**
  - The amount of the EDM pool that was in use for the cursor tables at the end of the interval.

- **PTs**
  - The amount of the EDM pool that was in use for the cursor tables at the end of the interval.

- **Available**
  - The amount of the EDM pool that was available at the end of the interval.

- **SKCTs**
  - The amount of the EDM pool that was in use for skeleton cursor tables.

- **SKPTs**
  - The amount of the EDM pool that was in use for skeleton package tables.

- **SQL Cache**
  - The amount of the EDM pool that was in use for dynamic SQL cache.

- **Total Pages**
  - The total capacity of the EDM pool.

For each field described below, four statistics are provided:

- interval quantity, which reflects the amount of activity that occurred during the interval.
- rate per minute
- rate per thread
- rate per commit

Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

- **Failures due to EDM Pool Full**
  - Failures that occurred because the pool was full.

- **Database Descriptor (DBD) Reqs**
  - Requests for database descriptors.

- **DBD Loads**
  - Database descriptors that had to be loaded from DASD.

- **% of DBD Loads from DASD**
  - The percentage of DBD requests that resulted in DBD loads from DASD. This value should be kept low; 20% or lower is considered acceptable.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cursor Table (CT) Reqs</strong></td>
<td>Requests for cursor tables.</td>
</tr>
<tr>
<td><strong>CT Loads</strong></td>
<td>Cursor tables that had to be loaded from DASD.</td>
</tr>
<tr>
<td><strong>% of CT Loads from DASD</strong></td>
<td>The percentage of CT requests that resulted in CT loads from DASD. This value should be kept low; 20% or lower is considered acceptable.</td>
</tr>
<tr>
<td><strong>Package Table (PT) Reqs</strong></td>
<td>Requests for package tables.</td>
</tr>
<tr>
<td><strong>PT Loads</strong></td>
<td>Package tables that had to be loaded from DASD.</td>
</tr>
<tr>
<td><strong>% of PT Loads from DASD</strong></td>
<td>The percentage of PT requests that resulted in PT loads from DASD. This value should be kept low; 20% or lower is considered acceptable.</td>
</tr>
<tr>
<td><strong>Dynamic SQL (DSC) Reqs</strong></td>
<td>Requests to cache dynamic SQL.</td>
</tr>
<tr>
<td><strong>DSC Loads</strong></td>
<td>Dynamic SQL caches that had to be loaded from DASD.</td>
</tr>
<tr>
<td><strong>% of DSC Loads into Pool</strong></td>
<td>The percentage of dynamic SQL cache requests that resulted in DSC loads into pool. This value should be kept low.</td>
</tr>
</tbody>
</table>
The Log Manager Statistics Summary by Report Interval screen provides an overview of the DB2 log manager activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about
- a report interval, move the cursor to the desired line and press the zoom key (PF11).
  (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

**Fields**

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Interval**: Provides the date and time that mark the end of the report interval.
- **Total Reads**: The number of times DB2 read a log record.
- **Read Delay**: The number of log reads that were delayed.
- **Total Writes**: The number of times DB2 externalized log records, both synchronously and asynchronously.
- **Write Delay**: The number of times DB2 tried to place log records in the output buffer but could not find an available buffer.
- **BSDS Access**: The number of times the bootstrap dataset access routine was called.
- **Archive Read Allocs**: The number of archive read allocations, which is an indicator of archive log open/close activity.
- **Archive Write Allocs**: The number of archive write allocations, which is an indicator of archive log open/close activity.
The Log Manager Statistics Detail screen provides detailed information about the logging and archiving activity of the DB2 log manager during a specified report interval.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>High Used Log</td>
<td>The relative byte address (RBA) of the record that was being logged at the end of the interval.</td>
</tr>
<tr>
<td>Number of Bytes Used</td>
<td>The number of bytes of the log dataset that were used during the interval.</td>
</tr>
</tbody>
</table>

For each field described below, four statistics are provided:
- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per minute
- rate per thread
- rate per commit
Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reads from Output Buffers</td>
<td>The reads that DB2 was able to perform without looking outside the output buffer.</td>
</tr>
<tr>
<td>Reads from Active Log</td>
<td>The reads that DB2 had to go to the active log to perform.</td>
</tr>
<tr>
<td>Reads from Archive Log</td>
<td>The reads that DB2 had to go to the archive log to perform.</td>
</tr>
<tr>
<td>Reads Delayed - Tape Contention</td>
<td>The number of reads delayed because a tape volume was already in use.</td>
</tr>
<tr>
<td>Reads Delayed - No Tape Unit</td>
<td>Number of archive log reads that were delayed because of unavailable tape units, or because the maximum amount of read parallelism is being used (not likely).</td>
</tr>
<tr>
<td>Look-Ahead Tape Mounts Attempted</td>
<td>Number of look-ahead tape mounts attempted.</td>
</tr>
<tr>
<td>Look-Ahead Tape Mounts Performed</td>
<td>Number of successful look-ahead tape mounts.</td>
</tr>
<tr>
<td>Write NOWAIT Requests</td>
<td>The times DB2 externalized log records asynchronously.</td>
</tr>
<tr>
<td>Write FORCE Requests</td>
<td>The times DB2 externalized log records synchronously.</td>
</tr>
<tr>
<td>Write Delayed - No Buffer</td>
<td>DB2 attempts to place log records in the output buffer when no log buffer could be found.</td>
</tr>
<tr>
<td>Write Active Log Buffers</td>
<td>Calls to the log write routine.</td>
</tr>
<tr>
<td>Active Log CIs Created</td>
<td>Active log control intervals created.</td>
</tr>
<tr>
<td>Archive Log Read Allocations</td>
<td>Archive read allocations, which reflect archive log open/close activity.</td>
</tr>
<tr>
<td>Archive Log Write Allocations</td>
<td>Archive write allocations, which reflect archive log open/close activity.</td>
</tr>
<tr>
<td>Archive Log CIs Offloaded</td>
<td>Number of active log control intervals offloaded to archive datasets.</td>
</tr>
<tr>
<td>BSDS Access Requestsv</td>
<td>Calls to the bootstrap dataset access routine.</td>
</tr>
</tbody>
</table>
Lock Manager Statistics Summary by Report Interval

The Lock Manager Statistics Summary by Report Interval screen provides an overview of the locking activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a report interval, move the cursor to the desired line and press the zoom key (PF11). Each date/time displayed reflects the end of an interval.
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Interval**: Provides the date and time that mark the end of the report interval.
- **Deadlocks**: The total number of deadlocks detected during the interval.
- **Timeouts**: The total number of times a suspension of a unit of work lasted longer than the IRLM timeout value.
- **Total Suspends**: The total number of suspensions of a unit of work.
- **Total Lock Reqs**: The number of requests to IRLM to obtain, change, query, and release locks, as well as other IRLM requests.
- **Escalate to SHR**: The number of times the allowable number of locks per tablespace was exceeded, causing a page (IS) lock to escalate to a shared (S) lock.
**Escalate to EXC**  The number of times the allowable number of locks per tablespace was exceeded, causing a page (IX) lock to escalate to an exclusive (X) lock.
Lock Manager/Claim/Drain Statistics Detail

The Lock Manager/Claim/Drain Statistics Detail screen displays detailed information about locking and claim and drain activity during a specified report interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the interval currently displayed.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the interval currently displayed.

For each field described below, four statistics are provided:

- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per minute
- rate per thread
- rate per commit

Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadlocks Detected</td>
<td>The number of deadlocks detected.</td>
</tr>
<tr>
<td>Timeouts Detected</td>
<td>Occasions when suspension of a unit of work lasted longer than the IRLM timeout value.</td>
</tr>
<tr>
<td>Susp Detected - Lock Only</td>
<td>Suspensions of a unit of work because a lock could not be obtained.</td>
</tr>
<tr>
<td>Susp Detected - Latch Only</td>
<td>DB2 internal latch suspensions.</td>
</tr>
<tr>
<td>Susp Detected - Other</td>
<td>Suspensions caused by something other than locks and latches.</td>
</tr>
<tr>
<td>Lock Escalations - to Shared</td>
<td>Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IS) lock to escalate to a shared (S) lock.</td>
</tr>
<tr>
<td>Lock Escalations - to Exclusive</td>
<td>Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IX) lock to escalate to an exclusive (X) lock.</td>
</tr>
<tr>
<td>Lock Requests</td>
<td>Requests to IRLM to obtain a lock on a resource.</td>
</tr>
<tr>
<td>Unlock Requests</td>
<td>Requests to IRLM to unlock a resource.</td>
</tr>
<tr>
<td>Query Requests</td>
<td>Requests to IRLM to query a lock.</td>
</tr>
<tr>
<td>Change Requests</td>
<td>Requests to IRLM to change a lock.</td>
</tr>
<tr>
<td>Other IRLM Requests</td>
<td>Requests to IRLM to perform a function other than those listed above.</td>
</tr>
<tr>
<td>Claim Requests</td>
<td>Number of claim requests.</td>
</tr>
<tr>
<td>Unsuccessful Claim Requests</td>
<td>Number of unsuccessful claim requests.</td>
</tr>
<tr>
<td>Drain Requests</td>
<td>Number of drain requests.</td>
</tr>
<tr>
<td>Unsuccessful Drain Requests</td>
<td>Number of unsuccessful drain requests.</td>
</tr>
</tbody>
</table>
The Global Lock Statistics Summary by Report Interval screen provides an overview of the global locking activity that was recorded during a series of report intervals. This screen is available only for DB2 Version 4 and above.

For more detailed statistics about a report interval, move the cursor to the desired line and press the zoom key (PF11). Each date/time displayed reflects the end of an interval.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about
- a report interval, move the cursor to the desired line and press the zoom key (PF11)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collection Interval</strong></td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td><strong>Start</strong></td>
<td>The start time of the first interval in this display.</td>
</tr>
<tr>
<td><strong>Report Interval</strong></td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td><strong>Combine Level</strong></td>
<td>This field determines the report interval. It is set on the Historical Report Option panel. Possible values are:</td>
</tr>
<tr>
<td><strong>End</strong></td>
<td>The end time of the last interval in this display.</td>
</tr>
<tr>
<td><strong>Interval</strong></td>
<td>Provides the date and time that mark the end of the report interval.</td>
</tr>
<tr>
<td><strong>Total XES Requests</strong></td>
<td>The total number of lock, change, and unlock requests that were propagated to MVS either synchronously or asynchronously.</td>
</tr>
<tr>
<td><strong>Total Suspends</strong></td>
<td>The total number of XES requests that resulted in a suspension. This includes suspends for IRLM global contention, XES global contention, or false contention.</td>
</tr>
<tr>
<td><strong>Total P-Locks</strong></td>
<td>The total number of lock, change, and unlock requests for P-locks.</td>
</tr>
<tr>
<td><strong>Total Negotiate</strong></td>
<td>The number of times that this DB2 member was driven to negotiate a P-lock.</td>
</tr>
</tbody>
</table>
Incompat Retained

The number of global lock or change requests that failed because of an incompatible retained lock. Certain P-locks can be retained because of a system failure. Another DB2 member cannot access the data that the retained P-lock is protecting unless it requests a P-lock in a compatible state.

False Contention

The rate of false contentions to real contentions.
Global Lock Statistics Detail

The Global Lock Statistics Detail screen displays detailed information about global locking activity in a data sharing environment during a specified report interval. This screen is available only for DB2 Version 4 and above.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options at the top of the screen or other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the interval currently displayed.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option panel. Possible values are:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the interval currently displayed.
- **Total Global Contention**: The percent of synchronous XES lock, change, or unlock requests that resulted in global contention.
- **False Contention**: The rate of false contentions to real contentions. This number should be no more than 50%.
- **P-Lock/Notify Engines**: The number of engines available for P-lock exit or notify exit requests.

For each field described below, four statistics are provided:
- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per second
- rate per thread
Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /SECOND is the number of seconds in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-lock Lock Requests</td>
<td>Number of lock requests for P-locks.</td>
</tr>
<tr>
<td>P-lock Unlock Requests</td>
<td>Number of unlock requests for P-locks.</td>
</tr>
<tr>
<td>P-lock Change Requests</td>
<td>Number of change requests for P-locks.</td>
</tr>
<tr>
<td>XES Lock Requests</td>
<td>The number of lock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests. Only the most restrictive lock for a particular resource is propagated to XES and the coupling facility.</td>
</tr>
<tr>
<td>XES Unlock Requests</td>
<td>The number of unlock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td>XES Change Requests</td>
<td>The number of change requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td>XES Asynchronous Requests</td>
<td>The number of L-locks and P-locks propagated to XES asynchronously. This occurs when a new inter-DB2 interest occurs on a parent resource or when a request completes after the requestor's execution unit has been suspended.</td>
</tr>
<tr>
<td>XES Asynchronous Requests</td>
<td>The number of L-locks and P-locks propagated to XES asynchronously. This occurs when a new inter-DB2 interest occurs on a parent resource or when a request completes after the requestor's execution unit has been suspended.</td>
</tr>
<tr>
<td>XES Asynchronous Requests</td>
<td>The number of L-locks and P-locks propagated to XES asynchronously. This occurs when a new inter-DB2 interest occurs on a parent resource or when a request completes after the requestor's execution unit has been suspended.</td>
</tr>
<tr>
<td>Suspend-IRLM Global Contention</td>
<td>The number of suspends due to IRLM global resource contentions. IRLM lock states were in conflict and inter-system communication is required to resolve the conflict.</td>
</tr>
<tr>
<td>Suspend-XES Global Contention</td>
<td>The number of suspends due to MVS XES global resource contentions that were not IRLM-level contentions. The XES lock states were in conflict, but the IRLM lock states were not.</td>
</tr>
<tr>
<td>Suspend-FALSE Con Tedion</td>
<td>The number of suspends caused by MVS XES false contentions. XES detects hash class contention when two different locks on different resources hash to the same entry in the coupling facility lock table. The requester is suspended until it is determined that there is no real lock contention.</td>
</tr>
<tr>
<td>Negotiate Pageset P-Locks</td>
<td>The number of times this DB2 member was driven to negotiate a page set/partition P-lock because of changing inter-DB2 interest levels on the page set/partition.</td>
</tr>
<tr>
<td>Negotiate Page P-Locks</td>
<td>The number of times this DB2 member was driven to negotiate a page P-lock because of inter-DB2 P-lock contention.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Negotiate Other P-Locks</strong></td>
<td>The number of times this DB2 member was driven to negotiate a P-lock type other than pageset/partition or page.</td>
</tr>
<tr>
<td><strong>Negotiate P-Lock Change</strong></td>
<td>The number of times a P-lock change request was issued during P-lock negotiation.</td>
</tr>
<tr>
<td><strong>Incompatible Retained Locks</strong></td>
<td>The number of global lock or change requests that failed because of an incompatible retained lock. Certain P-locks can be retained because of a system failure. Another DB2 member cannot access the data that the retained P-lock is protecting unless it requests a P-lock in a compatible state.</td>
</tr>
<tr>
<td><strong>Notify Messages Sent</strong></td>
<td>The number of notify messages sent.</td>
</tr>
<tr>
<td><strong>Notify Messages Received</strong></td>
<td>The number of notify messages received.</td>
</tr>
<tr>
<td><strong>Engine Not Available</strong></td>
<td>The number of times an engine was not available for a P-lock exit or a notify exit request.</td>
</tr>
</tbody>
</table>
SQL Statistics Summary by Report Interval

The SQL Statistics Summary by Report Interval screen provides an overview of the SQL activity that was recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a report interval, move the cursor to the desired line and press the zoom key (PF11). (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.
- **Start**: The start time of the first interval in this display.
- **Report Interval**: This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.
- **Combine Level**: This field determines the report interval. It is set on the Historical Report Option screen. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.
- **End**: The end time of the last interval in this display.
- **Manipulative (DML)**: The quantity and rate per minute of DML (data manipulative language) statements during the interval.
- **Control (DCL)**: The quantity and rate per minute of DCL (data control language) statements during the interval.
- **Definitional (DDL)**: The quantity and rate per minute of DDL (data definitional language) statements during the interval.
The SQL/RID Pool/Stored Procedures Statistics Detail screen allows you to view detailed information about SQL, RID Pool, I/O Parallelism, and Stored Procedure activity during a specified report interval.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

**Fields**

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collection Interval</strong></td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td><strong>Start</strong></td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td><strong>Report Interval</strong></td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td><strong>Combine Level</strong></td>
<td>This field determines the report interval. It is set on the Historical Report Option screen. Possible values:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong> Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong> Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td><strong>End</strong></td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td><strong>Maximum Degree of Parallelism Executed</strong></td>
<td>The maximum degree of parallel I/O processing for all parallel groups. This is a high-water mark.</td>
</tr>
</tbody>
</table>

For each field described below, five statistics are provided:

- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per minute during the last cycle
- rate per thread during the last cycle
- rate per commit during the last cycle
- percentage of DML, DCL, or DDL during the last cycle
Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

**SQL Manipulative (DML)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT</td>
<td>Select statements executed to retrieve rows from a DB2 table.</td>
</tr>
<tr>
<td>INSERT</td>
<td>Insert statements executed to add rows to a DB2 table.</td>
</tr>
<tr>
<td>UPDATE</td>
<td>Update statements executed to alter existing rows in a DB2 table.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Delete statements executed to remove rows from a DB2 table.</td>
</tr>
<tr>
<td>OPEN CURSOR</td>
<td>Open statements executed to prepare cursors for subsequent Fetch operations.</td>
</tr>
<tr>
<td>CLOSE CURSOR</td>
<td>Close statements executed to close previously opened cursors.</td>
</tr>
<tr>
<td>FETCH</td>
<td>Fetch statements executed to retrieve rows from DB2 tables.</td>
</tr>
<tr>
<td>PREPARE</td>
<td>Occasions when SQL statements were dynamically prepared for execution.</td>
</tr>
<tr>
<td>DESCRIBE</td>
<td>Describe statements executed to obtain information about prepared SQL statements.</td>
</tr>
<tr>
<td>DESCRIBE TABLE</td>
<td>Describe table statements executed to obtain information about a table or view.</td>
</tr>
</tbody>
</table>

**SQL Control (DCL)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL</td>
<td>Call statements executed to invoke a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>COMMENT ON</td>
<td>Comment On statements issued to add or replace comments for user-defined objects (tables, views, columns, and sets of columns) in the DB2 catalog.</td>
</tr>
<tr>
<td>CONNECT (Type 1)</td>
<td>Connect (Type 1) statements executed to connect an application process to a designated server.</td>
</tr>
<tr>
<td>CONNECT (Type 2)</td>
<td>Connect (Type 2) statements executed to connect an application process to a designated server.</td>
</tr>
<tr>
<td>GRANT</td>
<td>Grant statements issued to extend DB2 privileges to users.</td>
</tr>
<tr>
<td>INCREMENTAL BIND</td>
<td>Occurrences of incremental bind, which take place upon execution of a DB2 plan that is bound as VALIDATE(RUN).</td>
</tr>
<tr>
<td>LABEL ON</td>
<td>Label On statements issued to add or replace labels in DB2 catalog descriptions of tables, views, columns, and sets of columns.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LOCK TABLE</td>
<td>Lock Table statements issued to lock a tablespace or table in a segmented</td>
</tr>
<tr>
<td></td>
<td>tablespace.</td>
</tr>
<tr>
<td>RELEASE</td>
<td>Release statements executed to place one or more connections in the</td>
</tr>
<tr>
<td></td>
<td>released state.</td>
</tr>
<tr>
<td>REVOKE</td>
<td>Revoke statements issued to revoke users' DB2 privileges.</td>
</tr>
<tr>
<td>SET CONNECTION</td>
<td>Set Connection statements executed to establish the application server of</td>
</tr>
<tr>
<td></td>
<td>the process.</td>
</tr>
<tr>
<td>SET CURRENT</td>
<td>Set Current Degree statements executed to assign a value to the CURRENT</td>
</tr>
<tr>
<td>DEGREE</td>
<td>DEGREE special register.</td>
</tr>
<tr>
<td>SET CURRENT</td>
<td>Set Current Rule statements executed to assign a value to the current rules</td>
</tr>
<tr>
<td>RULES</td>
<td>special register. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>SET CURRENT</td>
<td>Set Current SQLID statements issued to change your current authorization</td>
</tr>
<tr>
<td>SQLID</td>
<td>ID.</td>
</tr>
<tr>
<td>SET HOST</td>
<td>Set Host Variable statements issued.</td>
</tr>
<tr>
<td>VARIABLE</td>
<td></td>
</tr>
<tr>
<td>Total DCL</td>
<td>All data control language statements.</td>
</tr>
</tbody>
</table>

**SQL Definitional (DDL)**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATE TABLE</td>
<td>Create Table statements issued to define a DB2 table.</td>
</tr>
<tr>
<td>CREATE INDEX</td>
<td>Create Index statements issued to establish indexes on DB2 tables.</td>
</tr>
<tr>
<td>CREATE TABLESPACE</td>
<td>Create Tablespace statements issued to establish DB2 tablespaces.</td>
</tr>
<tr>
<td>CREATE DATABASE</td>
<td>Create Database statements issued to establish DB2 databases.</td>
</tr>
<tr>
<td>CREATE STOGROUP</td>
<td>Create Storage group statements issued to establish DB2 storage groups.</td>
</tr>
<tr>
<td>CREATE SYNONYM</td>
<td>Create Synonym statements issued to create alternate names for DB2 tables</td>
</tr>
<tr>
<td></td>
<td>and views.</td>
</tr>
<tr>
<td>CREATE VIEW</td>
<td>Create View statements issued to establish views of DB2 tables.</td>
</tr>
<tr>
<td>CREATE ALIAS</td>
<td>Create Alias statements issued to achieve “location transparency” of DB2</td>
</tr>
<tr>
<td></td>
<td>tables. This field is used primarily to refer to tables and views from</td>
</tr>
<tr>
<td></td>
<td>remote DB2 subsystems in a distributed environment.</td>
</tr>
<tr>
<td>DROP TABLE</td>
<td>Drop Table statements issued to remove tables from DB2 databases.</td>
</tr>
<tr>
<td>DROP INDEX</td>
<td>Drop Index statements issued to remove indexes from DB2 tables.</td>
</tr>
<tr>
<td>DROP TABLESPACE</td>
<td>Drop Tablespace statements issued to delete tablespaces.</td>
</tr>
<tr>
<td>DROP DATABASE</td>
<td>Drop Database statements issued to delete databases.</td>
</tr>
<tr>
<td>DROP STOGROUP</td>
<td>Drop Storage group statements issued to delete storage group definitions.</td>
</tr>
</tbody>
</table>
### SQL/RID Pool/Stored Procedures Statistics Detail

**DROP SYNONYM**  
Drop Synonym statements issued to delete alternative table names and view names.

**DROP VIEW**  
Drop View statements issued to delete table views.

**DROP ALIAS**  
Drop Alias statements issued to delete view and table aliases from the DB2 catalog.

**DROP PACKAGE**  
Drop Package statements issued to delete packages.

**ALTER TABLE**  
Alter Table statements issued to change table attributes.

**ALTER INDEX**  
Alter Index statements issued to change index attributes.

**ALTER TABLESPACE**  
Alter Tablespace statements issued to change tablespace attributes.

**ALTER STOGROUP**  
Alter Storage group statements issued to add devices to and delete devices from storage groups.

**ALTER DATABASE**  
Alter Database statements issued to change database attributes.

**Total DDL**  
All data definitional language statements.

### RID Pool Accesses

For each field described below, four statistics are provided:

- **interval quantity**, which reflects the amount of activity that occurred during the interval
- **rate per minute**
- **rate per thread**
- **rate per commit**

**Successful**  
Number of times RID list processing was used when accessing a DB2 table.

**Not Used (No Storage)**  
Number of times RID list processing was terminated because of insufficient storage to hold the list of RIDs.

**Not Used (Max Limit)**  
Number of times RID list processing was terminated because the number of RIDs would exceed a RID limit or threshold.

### I/O Parallelism

For each field described below, five statistics are provided:

- **total quantity**, which reflects the amount of activity since DB2 was started
- **interval Quantity**, which reflect activity during the last cycle
- **rate per minute during the last cycle**
- **rate per thread during the last cycle**
- **rate per commit during the last cycle**

**Groups Executed**  
Number of parallel groups that were executed.

**Planned Degree Executed**  
Number of parallel groups that were executed at the planned parallel degree.
Stored Procedures

For each field described below, five statistics are provided:

- Total quantity, which reflects the amount of activity since DB2 was started.
- Interval Quantity, which reflects activity during the last cycle.
- Rate per minute during the last cycle.
- Rate per thread during the last cycle.
- Rate per commit during the last cycle.

**Note:** These fields appear only for DB2 Version 4 or above.

**Reduced Degree Executed**
Number of parallel groups that were processed to a degree less than the planned degree because of a storage shortage or buffer pool contention.

**Seq (Cursor)**
Number of parallel groups that fell back to sequential mode because of a cursor that allows update or delete.

**Seq (No Buffer)**
Number of parallel groups that fell back to sequential mode because of a storage shortage or buffer pool contention.

**Seq (No ESA Sort)**
Number of parallel groups that fell back to sequential mode because of no ESA sort support.

**Seq (No ESA Enclave)**
Number of parallel groups that were executed in sequential mode because MVS/ESA enclave services were unavailable.

**Call Statements**
Call statements executed to invoke a stored procedure.

**Abended**
Call statements executed to invoke a stored procedure that terminated abnormally.

**Timed-Out**
Call statements executed to invoke a stored procedure that timed out while waiting to be scheduled.

**Rejected**
Call statements executed to invoke a stored procedure that was in the STOP ACTION(REJECT) state.
Open/Close Statistics Summary by Report Interval

This screen provides an overview of the open/close activity that is recorded during a series of report intervals. You can view more detailed statistics by zooming on one of the intervals.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a report interval, move the cursor to the desired line and press the zoom key (PF11). (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the first interval in this display.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option panel. Possible values are:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong> Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong> Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the last interval in this display.</td>
</tr>
<tr>
<td>Interval</td>
<td>Provides the date and time that mark the end of the report interval.</td>
</tr>
<tr>
<td>High Water Open DS</td>
<td>Maximum number of datasets open at any given time.</td>
</tr>
<tr>
<td>Current Open DS</td>
<td>The current number of open datasets.</td>
</tr>
<tr>
<td>Not-in-use DS Request</td>
<td>The number of requests to open a dataset that was on the deferred close queue. When this occurs, a physical dataset open is not necessary.</td>
</tr>
<tr>
<td>Not-in-use DS Closed</td>
<td>The number of not-in-use datasets that were closed because the total number of open datasets reached the deferred close threshold. The deferred close threshold value is based on the smaller of the value of DSMAX or the MVS DD limit.</td>
</tr>
<tr>
<td><strong>DS Conv to Read-only</strong></td>
<td>Number of infrequently updated datasets converted from a read-write state to a read-only state (pseudo-close). The SYSLGRNG entry is closed at this time.</td>
</tr>
</tbody>
</table>
The Open/Close Statistics Detail screen provides detailed information about open and close dataset activity occurring within the DB2 subsystem during a specified report interval.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

**Fields**

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collection Interval</strong></td>
<td>The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.</td>
</tr>
<tr>
<td><strong>Start</strong></td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td><strong>Report Interval</strong></td>
<td>This field reflects the selected combine level. If Combine Level = NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td><strong>Combine Level</strong></td>
<td>This field determines the report interval. It is set on the Historical Report Option panel. Possible values:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong> Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong> Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td><strong>End</strong></td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td><strong>Current Number Open Datasets</strong></td>
<td>The current number of open database datasets.</td>
</tr>
<tr>
<td><strong>High-water Mark Open Datasets</strong></td>
<td>The maximum number of datasets open at any one time since DB2 was started.</td>
</tr>
<tr>
<td><strong>High-water Mark Not-in-use Datasets</strong></td>
<td>The maximum number of pagesets that are not in use but are not physically closed.</td>
</tr>
<tr>
<td><strong>Current Number Not-in-use Datasets</strong></td>
<td>The current number of open pagesets that are not in use but are not physically closed.</td>
</tr>
</tbody>
</table>
For each field described below, four statistics are provided:

- interval quantity, which reflects the amount of activity that occurred during the interval
- rate per minute
- rate per thread
- rate per commit

Also note that the column headings for the three rate columns include a count in parentheses:

- The number under /MINUTE is the number of minutes in the interval.
- The number under /THREAD is the number of create threads during the interval.
- The number under /COMMIT is the number of commit requests (including abort requests) during the interval.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not-in-use Datasets Requested</td>
<td>Number of requests to open a dataset that was on the deferred close queue. When this occurs, a physical dataset open is not necessary.</td>
</tr>
<tr>
<td>Not-in-use Datasets Closed</td>
<td>Number of not-in-use datasets that were closed because the total number of open datasets reached the deferred close threshold. The deferred close threshold is based on the smaller of the value of DSMAX or the MVS DD limit.</td>
</tr>
<tr>
<td>Datasets Converted to Read-Only</td>
<td>Number of infrequently updated datasets converted from a read-write to a read-only state (pseudo-close). The SYSLGRNG entry is closed at this time.</td>
</tr>
</tbody>
</table>
DB2 Command Statistics By Report Interval

This screen provides an overview of DB2 command activity recorded during a series of report intervals. You can view detailed statistics by zooming in on that interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a report interval, move the cursor to the desired line and press the zoom key (PF11).
  (Each date/time displayed reflects the end of an interval.)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of new-term history.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the first interval in the display.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The selected combine level. If Combine Level is NONE, the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>The report interval. You set this interval on the Historical Report Option panel. Possible values are:</td>
</tr>
<tr>
<td>HOURLY</td>
<td>Data is reported in hourly intervals.</td>
</tr>
<tr>
<td>NONE</td>
<td>Data is reported in the same unit specified by the collection interval.</td>
</tr>
</tbody>
</table>

For each field described below, three statistics are provided:

- the interval quantity, which reflects the amount of activity that occurred during the interval
- the rate per minute during the interval
- the percentage of total commands during the interval

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>START/STOP DATABASE</td>
<td>The number of Start and Stop Database commands executed this interval to change the availability of specified databases.</td>
</tr>
<tr>
<td>START/STOP/MODIFY TRACE</td>
<td>The number of Start, Stop, and Modify Trace commands executed this interval to trace activity in the DB2 subsystem.</td>
</tr>
<tr>
<td><strong>ARCHIVE LOG</strong></td>
<td>The number Archive Log commands executed to initiate a DB2 active log switch.</td>
</tr>
<tr>
<td><strong>RECOVER/RESET INDOUBT</strong></td>
<td>The number of Recover and Reset Indoubt commands executed this interval to recover or purge indoubt threads.</td>
</tr>
<tr>
<td><strong>CANCEL DDF THREAD</strong></td>
<td>The number of Cancel DDF Thread commands executed this interval to cancel a distributed thread.</td>
</tr>
<tr>
<td><strong>ALTER BUFFERPOOL</strong></td>
<td>The number of Alter Bufferpool commands executed this interval to alter attributes for active or inactive bufferpools.</td>
</tr>
</tbody>
</table>
DB2 Command Statistics Detail

This screen provides detailed statistics about DB2 command activity during a specific report interval.

Highlighting
OMEGAMON II does not highlight any fields on this screen.

Navigation
For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields
Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Interval</td>
<td>The time interval specified for collection of near-term history.</td>
</tr>
<tr>
<td>Start</td>
<td>The start time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>This field reflects the selected combine level. If Combine Level is NONE,</td>
</tr>
<tr>
<td></td>
<td>the report interval is the same as the collection interval.</td>
</tr>
<tr>
<td>Combine Level</td>
<td>This field determines the report interval. It is set on the Historical Report Option panel. Possible values are:</td>
</tr>
<tr>
<td></td>
<td><strong>HOURLY</strong> Data will be reported in hourly intervals.</td>
</tr>
<tr>
<td></td>
<td><strong>NONE</strong> Data will be reported in the time unit specified by the collection interval.</td>
</tr>
<tr>
<td>End</td>
<td>The start time of the interval currently displayed.</td>
</tr>
</tbody>
</table>

For each field described below three statistics are provided:
- interval quantity, which is the activity during the interval
- rate per minute during the interval
- percentage of total commands during the interval

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTER BUFFERPOOL</td>
<td>Alter Bufferpool commands executed to alter attributes for active or inactive buffer pools. For DB2 Version 4, this field includes counts.</td>
</tr>
<tr>
<td>ARCHIVE LOG</td>
<td>Archive Log commands executed to initiate a DB2 active log switch.</td>
</tr>
<tr>
<td>CANCEL DDF THREAD</td>
<td>Cancel DDF Thread commands executed to cancel a distributed thread.</td>
</tr>
<tr>
<td>DISPLAY DATABASE</td>
<td>Display Database commands executed to display status information about tablespaces and indexspaces within a database.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DISPLAY THREAD</td>
<td>Display Thread commands executed to display status information about DB2 threads.</td>
</tr>
<tr>
<td>DISPLAY UTILITY</td>
<td>Display Utility commands executed to display status information about DB2 utility jobs.</td>
</tr>
<tr>
<td>DISPLAY TRACE</td>
<td>Display Trace commands executed to display a list of active traces.</td>
</tr>
<tr>
<td>DISPLAY RLIMIT</td>
<td>Display Rlimit commands executed to display the current status of the resource limit facility.</td>
</tr>
<tr>
<td>DISPLAY LOCATION</td>
<td>Display Location commands executed to display statistics of threads with distributed relationships.</td>
</tr>
<tr>
<td>DISPLAY BUFFERPOOL</td>
<td>Display Bufferpool commands executed to display statistics for active or inactive buffer pools.</td>
</tr>
<tr>
<td>DISPLAY ARCHIVE</td>
<td>Display Archive commands executed to display input archive log information.</td>
</tr>
<tr>
<td>MODIFY TRACE</td>
<td>Modify Trace commands executed to change the IFCIDs being traced for an active trace.</td>
</tr>
<tr>
<td>RECOVER BSDS</td>
<td>Recover BSDS commands executed to recover a boot strap dataset that has been disabled by an error.</td>
</tr>
<tr>
<td>RECOVER INDOUBT</td>
<td>Recover Indoubt commands executed to recover threads left in the indoubt status.</td>
</tr>
<tr>
<td>SET ARCHIVE</td>
<td>Set Archive commands executed to change the maximum tape units and the deallocation time parameters originally set in the installation parameters.</td>
</tr>
<tr>
<td>START DATABASE</td>
<td>Start Database commands executed to make stopped databases available for use.</td>
</tr>
<tr>
<td>START TRACE</td>
<td>Start Trace commands executed to begin collection of DB2 trace records.</td>
</tr>
<tr>
<td>START RLIMIT</td>
<td>Start Rlimit commands executed to start the resource limit facility.</td>
</tr>
<tr>
<td>START DDF</td>
<td>Start DDF commands executed to start the distributed data facility.</td>
</tr>
<tr>
<td>STOP DATABASE</td>
<td>Stop Database commands executed to make specified databases unavailable for use.</td>
</tr>
<tr>
<td>STOP TRACE</td>
<td>Stop Trace commands executed to stop collection of DB2 trace records.</td>
</tr>
<tr>
<td>STOP RLIMIT</td>
<td>Stop Rlimit commands executed to stop the resource limit facility.</td>
</tr>
<tr>
<td>STOP DDF</td>
<td>Stop DDF commands executed to stop the distributed data facility.</td>
</tr>
<tr>
<td>TERM UTILITY</td>
<td>Term Utility commands executed to terminate execution of a utility job.</td>
</tr>
<tr>
<td>UNRECOGNIZED COMMAND</td>
<td>Number of unrecognized commands.</td>
</tr>
<tr>
<td>Total</td>
<td>All DB2 commands.</td>
</tr>
</tbody>
</table>
Near-Term Historical Report Option

The Near-Term Historical Report Option screen allows you to set the combine level for near-term historical reporting. You can also view the current data collection interval and the number of intervals that have been collected since the online historical data collector was started.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

The Near-Term Historical Report Option screen displays the following fields:

- **Collection Interval**: The time interval specified for collection of near-term history. This unit of time was specified when the historical collector was started.

- **Number of Intervals Collected**: The number of intervals' worth of data that has been collected since the online data collector was started. The interval that is currently in progress is not included in this count.

- **Report Combine Level**: Use this field to establish the report interval for near-term historical reporting. Possible values:
  - **HOURLY**: Data will be reported in hourly intervals.
  - **NONE**: Data will be reported in the time unit specified by the collection interval.

**Note**: To change this setting permanently, you must save your user profile. Select the Save User option from the Profile Maintenance Menu.
Online Historical Collection Options

The Online Historical Collection Options screen allows you to view the current specifications for online data collection. For example, you can see which DB2 subsystem is being monitored, which DB2 traces are turned on, and where the data is being stored.

For information about setting data collection options, see the OMEGAMON II for DB2 Historical Reporting Guide.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.:

**DB2sys**
The identifier of the DB2 subsystem that is being monitored by the collector.

**DB2syswrite**
The identifier of the DB2 subsystem to which trace data is to be written. This field appears only if Writeoption is DB2.
Online Historical Collection Options

Interval The time interval for data collection.

Commit The frequency with which DB2 table inserts are committed. The default is 1 commit for every 500 inserts. (This field applies only when DB2 tables have been chosen as the storage medium.)

*Note:* This value is used to force a commit during periods of heavy insert activity. During low-volume periods, the collector performs a commit whenever there is a lull in the insert activity.

Destination The backup storage destination for the collected data.

Writeoption The selected storage medium for trace data. Possible values:

- **DB2** DB2 tables.
- **VSAM** VSAM datasets.
- **NONE** Data is not saved, but statistics data is available to the near-term history displays while the collector is active.

ARCVcccc The name of the archive JCL member in the *rhilev*.RKD2SAM dataset.

Ifireadtim The frequency of IFI reads on lightly loaded DB2s.

Tracebufsz The size of the buffer on the START TRACE command.

Statistics Displays Yes if this trace is turned on; displays No if this trace is not turned on.

Dsnzparm Displays Yes if this trace is turned on; displays No if this trace is not turned on.

Auditing Displays the number of each audit trace class that is turned on.

Accounting Displays the number of each accounting trace class that is turned on.

Sort Displays Yes if sort processing is selected; displays No if sort processing is not selected.

Lock Contention Displays Yes if lock timeout and deadlock information is being collected; displays No if it is not being collected.

Scan Displays Yes if scan processing is selected; displays No if scan processing is not selected.

Lock Suspension Displays Yes if lock wait information is being collected; displays No if it is not being collected.

Dynamic SQL Displays Yes if SQL text and access path information for dynamic SQL is being collected; displays No if that information is not being collected.

Negative SQL Displays Yes if SQL code information is currently being collected.
Online Historical Collection Options

The remainder of the screen displays storage, grouping, and filtering information.

If the selected Writeoption is **DB2 Tables**, OMEGAMON II displays the names of the selected tables. If the selected Writeoption is **VSAM Datasets**, OMEGAMON II displays the names of the selected datasets. If the selected Writeoption is **None**, the screen will display no more data after the Statistics field. When None is specified (and Statistics is Yes), the historical statistics data is not stored on any permanent media, but it is available for use by the near-term history displays.

**Group By**

The selected GROUPBY variables.

**Filtering**

The selected filtering values. An asterisk (*) at the end of the filtering value means that all collected data begins with the characters that precede the asterisk. A question mark (?) at any position in the filtering value serves as a wildcard for a single character.
Historical Collection Record Information

The Historical Collection Record Information screen shows you the type and number of historical records that have been collected and stored since the online collector was started. It also displays the timestamp of the first and last records of each type.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Accounting data.</td>
</tr>
<tr>
<td>DDF Section</td>
<td>Distributed accounting data.</td>
</tr>
<tr>
<td>BP Section</td>
<td>Buffer pool accounting data.</td>
</tr>
<tr>
<td>Pkg Section</td>
<td>Package accounting data.</td>
</tr>
<tr>
<td>Acctg-Sum</td>
<td>Summarized accounting data.</td>
</tr>
<tr>
<td>DDF Section</td>
<td>Summarized DDF data</td>
</tr>
<tr>
<td>Perf-Lock Cont</td>
<td>Lock timeout and deadlock data.</td>
</tr>
<tr>
<td>Perf-lock Susp</td>
<td>Lock suspension data.</td>
</tr>
<tr>
<td>Perf-Dynam SQL</td>
<td>SQL text and access path data.</td>
</tr>
<tr>
<td>BP Section</td>
<td>Summarized buffer pool accounting data.</td>
</tr>
<tr>
<td>Pkg Section</td>
<td>Summarized package accounting data.</td>
</tr>
<tr>
<td>Statistics</td>
<td>Statistical data.</td>
</tr>
<tr>
<td>DDF Section</td>
<td>Distributed statistical data.</td>
</tr>
<tr>
<td>BP Section</td>
<td>Buffer pool statistical data.</td>
</tr>
<tr>
<td>DSNZPARM</td>
<td>Installation parameter information.</td>
</tr>
<tr>
<td>Aud-Fail</td>
<td>Audit fail data.</td>
</tr>
<tr>
<td>Aud-Cntl</td>
<td>Audit control data.</td>
</tr>
<tr>
<td>Aud-DDL</td>
<td>Audit DDL data.</td>
</tr>
</tbody>
</table>
**Historical Collection Record Information**

**Aud-DML**  
Audit DML data.

**Aud-BIND**  
Audit bind data.

**Aud-ID Chg**  
Audit ID change data.

**Aud-Util**  
Audit utility data.

**Count**  
The number of records of this type that have been collected and stored since the collector was started.

**Timestamp of First Record**  
The date and time that the first record of this type was collected. Date format: *yyyy-mm-dd*. Time format: *hh:mm:ss:nnnnnn* (microseconds).

**Timestamp of Last Record**  
The date and time that the last record of this type was collected; that is, the most recent record. Date format: *yyyy-mm-dd*. Time format: *hh:mm:ss.nnnnn* (microseconds).
Online Historical Dataset Status

The Online Historical Dataset Status screen displays the status of online historical datasets and space utilization. This panel provides the following information:

- the name of the dataset defined in the historical collection option member
- the status of the dataset
- the percentage of dataset space that has been used.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- historical collection options or record information, choose one of the menu options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

- **H2 Dataset**: The name of the H2 (historical) dataset defined in the historical collection option member.
- **Status**: The status of the H2 dataset. Possible values:
  - ACTIVE
  - FULL
  - AVAIL (available)
  - UNAVAIL (unavailable)
  - ARCHIVE
- **% Full**: The percentage of space used in this H2 dataset.
Near-Term Thread History Filter Options

The Near-Term Thread History Filter options panel allows you to specify the reporting period for which you want to view near-term thread information, the intervals into which the report is divided, and filter options that restrict the data that is displayed on thread history panels.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about other topics, use the OMEGAMON II PF keys.

Fields

You can change the reporting period and filter options on the Near-Term Thread History Filter Options screen. To change a value, move the cursor to the value you want to change, and type the new value over it.

Display fields

Time of old available record

The earliest time for accounting data collected to the active datasets. This is either the time of the first IFCID 3 record or the oldest near-term thread summary record if detail is not being collected. Displays N/A when there is no accounting data collected to the active datasets.

Time of latest record

The latest time for accounting data collected to the active datasets. This is either the time of the last IFCID 3 record or the last near-term thread summary record if detail is not being collected. Displays N/A when there is no accounting data collected to the active datasets.

Total number of records

The number of accounting (IFCID 3) records collected to the datasets. This field shows zero if no detail accounting records have been collected.

Input fields

You can specify at most a 24 hour timespan for the start and end fields. The actual time period available for reporting is bound by the timespan of the records in the allocated datasets, which may be less than 24 hours.

START-DATE/TIME

The start date and time from which information is reported. You can specify the date and time in USA, EUR or ISO format.

END-DATE/TIME

The end date and time to which information is reported. You can specify the date and time in USA, EUR or ISO format.

RELATIVE-START

The number of minutes or hours prior to the current time on which the reporting period begins. You can specify a relative start in place of an absolute start date/time.
Near-Term Thread History Filter Options

RELATIVE-END
The number of minutes or hours after the start time on which the reporting period ends. You can specify a relative end in place of an absolute end date/time.

REPORT-INTERVAL
The time interval by which the report period is partitioned. The value you specify must be some multiple of the online collector summary record write frequency.

PLAN
The plan names by which the thread history displays are restricted. You can specify up to five values. This field supports data filtering for the near-term thread history displays. You can enter multiple values including wildcards. You can compare values using the equal (=) or not equal (\(^=\), \(<\>) comparison operators. Use the equal operator to OR multiple values. Use the not equal operator to AND multiple values.

AUTHID
The authorization ids by which the thread history displays are restricted. You can specify up to five values. This field supports data filtering for the near-term thread history displays. You can enter multiple values including wildcards. You can compare values using the equal (=) or not equal (\(^=\), \(<\>) comparison operators. Use the equal operator to OR multiple values. Use the not equal operator to AND multiple values.

CONNID
The connection ids by which the thread history displays are restricted. You can specify up to five values. This field supports data filtering for the near-term thread history displays. You can enter multiple values including wildcards. You can compare the values using the equal (=) or not equal (\(^=\), \(<\>) comparison operators. Use the equal operator to OR multiple values. Use the not equal operator to AND multiple values.

CONNTYPE
The connection types by which the thread history displays are restricted. You can specify up to five of the following values:

- TSO
- CALLATCH
- BATCH
- CICS
- DLI
- IMSBPP
- IMSMPP
- IMSCTRL
- IMSBMP
- IMS
- SYSDIR
- APPLDIR

TSO  TSO foreground and background (QWHCTSO)
CALLATCH  DB2 call attach (QWHCDB2C)
BATCH  DB2 call attach (QWHCDB2C)
CICS  CICS attach (QWHCCICS)
DLI  DL/I batch (QWHCDLIB)
IMSBPP  IMS attach BMP (QWHCIMSB)
IMSMPP  IMS attach MPP (QWHCIMSM)
IMSCTRL  IMS control region (QWHCICTL)
IMSBMP  IMS transaction BMP (QWHCTBMP)
IMS  All IMS threads including DL/I batch (QWHCDLIB+QWHCIMSB+QWHCIMSM+QWHCICTL+QWHCTBMP)
SYSDIR  System directed access (data base access threads) (QWHCDUW)
APPLDIR  Application directed access (data base access threads) (QWHCRUW)
### Near-Term Thread History Filter Options

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIST</strong></td>
<td>Data base access threads (System-directed and Application-directed) (QWHCDUW + QWHCRUW)</td>
<td>You can specify up to five values. This field supports filtering for the near-term thread history displays. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>CORRID</strong></td>
<td>The correlation ids by which the thread history displays are restricted. You can specify up to five values. This field supports data filtering for the near-term thread history displays. You can enter multiple values including wildcards. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can enter multiple values including wildcards. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>PACKAGE</strong></td>
<td>The package ids by which the thread history displays are restricted. You can specify up to five values. This field supports data filtering for the near-term thread history displays. You can enter multiple values including wildcards. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can enter multiple values including wildcards. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>DB2 CPU TIME</strong></td>
<td>The amount of DB2 processor time by which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can specify up to five values. This field supports data filtering for the near-term thread history displays. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>I/O ELAP TIME</strong></td>
<td>The amount of I/O elapsed time by which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>COMMIT</strong></td>
<td>The number of commits by which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>GETPAGES</strong></td>
<td>The number of GETPAGE statements for which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
<tr>
<td><strong>DB2 ELAP TIME</strong></td>
<td>The amount of DB2 elapsed time for which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
<td>You can compare values using the <code>equal (=)</code> or <code>not equal (^=, &lt;&gt;)</code> comparison operators. Use the <code>equal</code> operator to OR multiple values. Use the <code>not equal</code> operator to AND multiple values.</td>
</tr>
</tbody>
</table>
**DEADLK/TIMEOUT**  The number of deadlocks and/or lock timeouts by which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can compare values using the equal (=) or not equal (\(^=\), <>) comparison operators. Use the **equal** operator to OR multiple values. Use the **not equal** operator to AND multiple values.

**LOCK ESCAL**  The number of lock escalations by which the thread history displays are restricted. This field supports data filtering for the near-term thread history displays. You can compare values using the equal (=) or not equal (\(^=\), <>) comparison operators. Use the **equal** operator to OR multiple values. Use the **not equal** operator to AND multiple values.
Near-Term Thread History Filter Options - Confirmation

The Near-Term Thread History Filter Options - Confirmations screen shows you the reporting and filtering options you selected on the Near-Term Thread History Filter Options screen. You can change any value on this screen.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- thread history, use the PF11 (Zoom) key
- overview of thread activity, press Enter
- other topics, use the OMEGAMON II PF keys

Fields

To modify values on The Near-Term Thread History Filter Options - Confirmation screen, press F3. This screen displays the following data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>The start of the reporting period.</td>
</tr>
<tr>
<td>For</td>
<td>The number of minutes or hours after the start time at which the reporting</td>
</tr>
<tr>
<td></td>
<td>period ends. This field appears if a relative end was specified.</td>
</tr>
<tr>
<td>Report Interval</td>
<td>The number of minutes by which the report period is partitioned.</td>
</tr>
<tr>
<td>Plan Name</td>
<td>The plan names used to restrict the thread history screens. Up to five</td>
</tr>
<tr>
<td></td>
<td>values may be displayed along with the comparison operator.</td>
</tr>
<tr>
<td>Authorization Id</td>
<td>The authorization identifiers used to restrict the thread history screens.</td>
</tr>
<tr>
<td></td>
<td>Up to five values may be displayed along with the comparison operator.</td>
</tr>
<tr>
<td>Connection Id</td>
<td>The connection identifiers used to restrict the thread history displays.</td>
</tr>
<tr>
<td></td>
<td>Up to five values may be displayed along with the comparison operator.</td>
</tr>
<tr>
<td>Connection Type</td>
<td>The connection types used to restrict the thread history displays. Up to</td>
</tr>
<tr>
<td></td>
<td>five values may be displayed along with the comparison operator.</td>
</tr>
<tr>
<td>Correlation ID</td>
<td>The correlation identifiers used to restrict the thread history displays.</td>
</tr>
<tr>
<td></td>
<td>Up to five values may be displayed along with the comparison operator.</td>
</tr>
<tr>
<td>Commit</td>
<td>The number of commits used to restrict the thread history displays.</td>
</tr>
<tr>
<td>DB2 CPU Time</td>
<td>The amount of DB2 processor time used to restrict the thread history displays.</td>
</tr>
<tr>
<td>DB2 Elap Time</td>
<td>The amount of DB2 elapsed time used to restrict the thread history displays.</td>
</tr>
<tr>
<td>Deadlk/Timout</td>
<td>The number of deadlocks and/or lock timeouts used to restrict the thread</td>
</tr>
<tr>
<td></td>
<td>history displays.</td>
</tr>
<tr>
<td>Filter Option</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>I/O Elap Time</td>
<td>The amount of I/O elapsed time used to restrict the thread history displays.</td>
</tr>
<tr>
<td>Getpages</td>
<td>The number of GETPAGE statements used to restrict the thread history displays.</td>
</tr>
<tr>
<td>Lock Escal</td>
<td>The number of lock escalations used to restrict the thread history displays.</td>
</tr>
<tr>
<td>Package</td>
<td>The package identifiers used to restrict the thread history screens. Up to five values may be displayed along with the comparison operator.</td>
</tr>
</tbody>
</table>
Thread History By Report Interval

The Thread History by Report Interval screen provides an overview of thread activity for the specified reporting period, divided into a series of report intervals. Each time displayed on this screen reflects the start of an interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about a report interval, move the cursor to the desired line, enter a zoom selection, and press the zoom key (PF11). Each time displayed reflects the start of an interval. Possible zoom selections are:

- A  Thread summary by Plan.
- B  Thread summary by Authid.
- C  Thread summary by Plan, Authid.
- D  Thread summary by Authid, Plan.
- E  Thread summary (no grouping).
- F  Thread summary by subinterval, i.e., the online collector summary record write frequency. This is valid only when the report interval is set to a multiple of the innate subinterval.

- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time interval by which the report period is partitioned.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the first interval in the display.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows <strong>YES</strong> if thread filter values were used to create this display. Otherwise, <strong>NO</strong> is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the last interval in the display.</td>
</tr>
<tr>
<td>Time</td>
<td>The time of the start of the report interval.</td>
</tr>
<tr>
<td>Thrds</td>
<td>The number of threads completed in this interval.</td>
</tr>
<tr>
<td>Commit</td>
<td>The number of successful commits performed in this interval. For attachments that use two-phase commit protocol, this count represents the number of phase two commits. For others, this count represents the number of single-phase commit (sync) requests.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Abort</strong></td>
<td>The number of successful rollbacks performed in this interval.</td>
</tr>
<tr>
<td><strong>DML</strong></td>
<td>The number of DML calls issued in this interval.</td>
</tr>
<tr>
<td><strong>DLk/TOut</strong></td>
<td>The number deadlocks and timeouts occurred in this interval.</td>
</tr>
<tr>
<td><strong>In-DB2 Elap Tm</strong></td>
<td>The elapsed time spent in DB2 for this interval. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
<tr>
<td><strong>In-DB2 CPU Tm</strong></td>
<td>The CPU time spent in DB2 for this interval. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
<tr>
<td><strong>In-DB2 Wait Tm</strong></td>
<td>The time spent waiting in DB2 for this interval. Accounting class 3 data is required. Displays N/A if accounting class 3 data is not available. DB2 Accounting class 3 wait events are:</td>
</tr>
<tr>
<td></td>
<td>- Synchronous I/O waits</td>
</tr>
<tr>
<td></td>
<td>- Asynchronous Read I/O waits</td>
</tr>
<tr>
<td></td>
<td>- Asynchronous Write I/O waits</td>
</tr>
<tr>
<td></td>
<td>- Lock/latch waits</td>
</tr>
<tr>
<td></td>
<td>- Page latch waits</td>
</tr>
<tr>
<td></td>
<td>- Drain lock waits</td>
</tr>
<tr>
<td></td>
<td>- Drain of claims waits</td>
</tr>
<tr>
<td></td>
<td>- DB2 service task waits</td>
</tr>
<tr>
<td></td>
<td>- Archive Log Mode(QUIESCE) waits</td>
</tr>
<tr>
<td></td>
<td>- Archive read from tape waits</td>
</tr>
<tr>
<td><strong>Getpage</strong></td>
<td>The number of getpage requests issued in this interval.</td>
</tr>
<tr>
<td><strong>GetP/RIO</strong></td>
<td>The ratio of getpage requests to synchronous read I/Os for this interval.</td>
</tr>
</tbody>
</table>
Thread History By Report Subinterval

The Thread History by Report Subinterval screen provides summarized information about thread activity for a selected interval from the Thread History by Report Interval screen. Each time displayed on this screen reflects the start of a subinterval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about a report interval, move the cursor to the desired line, enter a zoom selection, and press the zoom key (PF11). Each time displayed reflects the start of an interval. Possible zoom selections are:

- **A** Thread summary by Plan.
- **B** Thread summary by Authid.
- **C** Thread summary by Plan, Authid.
- **D** Thread summary by Authid, Plan.
- **E** Thread summary (no grouping).
- **F** Thread summary by subinterval, i.e., the online collector summary record write frequency. This is valid only when the report interval is set to a multiple of the innate subinterval.

- other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

- **Report Interval** The time interval by which the report period is partitioned.
- **Start** The start date and time of the first interval in the display.
- **Report Filtered** This field shows **YES** if thread filter values were used to create this display. Otherwise, **NO** is displayed.
- **End** The end time of the last subinterval in the display.
- **Time** The time of the start of the report subinterval.
- **Thrds** The number of threads completed in this subinterval.
- **Commit** The number of successful commits performed in this subinterval. For attachments that use two-phase commit protocol, this count represents the number of phase two commits. For others, this count represents the number of single-phase commit (sync) requests.
- **Abort** The number of successful rollbacks performed in this subinterval.
- **DML** The number of DML calls issued in this subinterval.
### Thread History By Report Subinterval

**DLk/TOut**  
The number deadlocks and timeouts occurred in this subinterval.

**In-DB2 Elap Tm**  
The elapsed time spent in DB2 for this subinterval. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.

**In-DB2 CPU Tm**  
The CPU time spent in DB2 for this subinterval. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.

**In-DB2 Wait Tm**  
The time spent waiting in DB2 for this subinterval. Accounting class 3 data is required. Displays N/A if accounting class 3 data is not available. DB2 Accounting class 3 wait events are:
- Synchronous I/O waits
- Asynchronous Read I/O waits
- Asynchronous Write I/O waits
- Lock/latch waits
- Page latch waits
- Drain lock waits
- Drain of claims waits
- DB2 service task waits
- Archive Log Mode (QUIESCE) waits
- Archive read from tape waits

**Getpage**  
The number of getpage requests issued in this subinterval.

**GetP/RIO**  
The ratio of getpage requests to synchronous read I/Os for this subinterval.
Thread History By Plan

The Thread History by Plan screen provides information about thread activity grouped by plan for a selected report interval or subinterval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- threads associated with a plan, move the cursor to the desired line, and press the zoom key (PF11)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the displayed plan report.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows YES if thread filter values were used to create this display. Otherwise, NO is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>Plan</td>
<td>The DB2 plan name.</td>
</tr>
<tr>
<td>Thrds</td>
<td>The number of threads completed for the plan.</td>
</tr>
<tr>
<td>Commit</td>
<td>The number of successful commits performed by threads running this plan.</td>
</tr>
<tr>
<td></td>
<td>For attachments that use two-phase commit protocol, this count represents the number of phase two commits. For others, this count represents the number of single-phase commit (sync) requests.</td>
</tr>
<tr>
<td>Abort</td>
<td>The number of successful rollbacks performed by threads running this plan.</td>
</tr>
<tr>
<td>DML</td>
<td>The number of DML calls issued by threads running this plan.</td>
</tr>
<tr>
<td>DLk/TOut</td>
<td>The number deadlocks and timeouts that occurred for threads running this plan.</td>
</tr>
<tr>
<td>In-DB2 Elap Tm</td>
<td>The elapsed time spent in DB2 for threads running this plan. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
<tr>
<td>In-DB2 CPU Tm</td>
<td>The CPU time spent in DB2 for threads running this plan. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
</tbody>
</table>
**In-DB2 Wait Tm**  The time spent waiting in DB2 for threads running this plan. Accounting class 3 data is required. Displays **N/A** if accounting class 3 data is not available.

**Getpage**  The number of getpage requests issued by threads running this plan.

**GetP/RIO**  The ratio of getpage requests to synchronous read I/Os for this interval.
Thread History By Authid

The Thread History by Authid screen provides information about thread activity grouped by authid for a selected report interval or subinterval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- threads associated with an authid, move the cursor to the desired line, and press the zoom key (PF11)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the displayed authid report.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows <strong>YES</strong> if thread filter values were used to create this display. Otherwise, <strong>NO</strong> is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier.</td>
</tr>
<tr>
<td>Thrds</td>
<td>The number of threads completed for the authid.</td>
</tr>
<tr>
<td>Commit</td>
<td>The number of successful commits performed by threads run with this authid. For attachments that use two-phase commit protocol, this count represents the number of phase two commits. For others, this count represents the number of single-phase commit (sync) requests.</td>
</tr>
<tr>
<td>Abort</td>
<td>The number of successful rollbacks performed by threads run with this authid.</td>
</tr>
<tr>
<td>DML</td>
<td>The number of DML calls issued by threads run with this authid.</td>
</tr>
<tr>
<td>DLk/TOut</td>
<td>The number deadlocks and timeouts that occurred for threads run with this authid.</td>
</tr>
<tr>
<td>In-DB2 Elap Tm</td>
<td>The elapsed time spent in DB2 for threads run with this authid. Accounting class 2 data is required. Displays <strong>N/A</strong> if accounting class 2 data is not available.</td>
</tr>
<tr>
<td>In-DB2 CPU Tm</td>
<td>The CPU time spent in DB2 for threads run with this authid. Accounting class 2 data is required. Displays <strong>N/A</strong> if accounting class 2 data is not available.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>In-DB2 Wait Tm</strong></td>
<td>The time spent waiting in DB2 for threads run with this authid. Accounting class 3 data is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
<tr>
<td><strong>Getpage</strong></td>
<td>The number of getpage requests issued by threads run with this authid.</td>
</tr>
<tr>
<td><strong>GetP/RIO</strong></td>
<td>The ratio of getpage requests to synchronous read I/Os for threads run with this authid.</td>
</tr>
</tbody>
</table>
Thread History By Plan, Authid

The Thread History by Plan, Authid screen provides information about thread activity grouped by plan and authid for a selected report interval or subinterval.

Highlighting
OMEGAMON II does not highlight any fields on this screen.

Navigation
For additional information about
- threads associated with an authid, move the cursor to the desired line, and press the zoom key (PF11)
- related topics, choose on of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields
Here are descriptions for some of the fields displayed on this screen.

- **Report Interval**: The time of the displayed plan, authid report.
- **Start**: The start date and time of the interval currently displayed.
- **Report Filtered**: This field shows **YES** if thread filter values were used to create this display. Otherwise, **NO** is displayed.
- **End**: The end time of the interval currently displayed.
- **Plan**: The DB2 plan name. The plan name is displayed only on the first line within a group. However, if you sort this panel on a field other than the Plan+Authid combination, the plan name is displayed on each line.
- **Authid**: The DB2 authorization identifier of the threads.
- **Thrds**: The number of threads completed for the plan, authid.
- **Commit**: The number of successful commits performed by this plan, authid. For attachments that use two-phase commit protocol, this count represents the number of phase two commits. For others, this count represents the number of single-phase commit (sync) requests.
- **DML**: The number of DML calls issued.
- **In-DB2 Elap Tm**: The elapsed time spent in DB2. Accounting class 2 data is required. Displays **N/A** if accounting class 2 data is not available.
- **In-DB2 CPU Tm**: The CPU time spent in DB2 for threads run with this authid. Accounting class 2 data is required. Displays **N/A** if accounting class 2 data is not available.
- **In-DB2 Wait Tm**: The time spent waiting in DB2. Accounting class 3 data is required. Displays **N/A** if accounting class 3 data is not available.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getpage</td>
<td>The number of getpage requests issued.</td>
</tr>
<tr>
<td>GetP/RIO</td>
<td>The ratio of getpage requests to synchronous read I/Os.</td>
</tr>
</tbody>
</table>
Thread History By Authid,Plan

The Thread History by Authid,Plan screen provides information about thread activity grouped by plan and authid for a selected report interval or subinterval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- threads associated with an authid, move the cursor to the desired line, and press the zoom key (PF11)
- related topics, choose on of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the displayed authid,plan report.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows <strong>YES</strong> if thread filter values were used to create this display. Otherwise, NO is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization ID. The authorization ID is displayed on the only first line within a group. However, if you sort this panel on a field other than the Authid+Plan combination, the authorization ID is displayed on each line.</td>
</tr>
<tr>
<td>Thrds</td>
<td>The number of threads completed for the authid,plan.</td>
</tr>
<tr>
<td>Commit</td>
<td>The number of successful commits performed by this authid,plan. For attachments that use two-phase commit protocol, this count represents the number of phase two commits. For others, this count represents the number of single-phase commit (sync) requests.</td>
</tr>
<tr>
<td>DML</td>
<td>The number of DML calls issued.</td>
</tr>
<tr>
<td>In-DB2 Elap Tm</td>
<td>The elapsed time spent in DB2. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
<tr>
<td>In-DB2 CPU Tm</td>
<td>The CPU time spent in DB2 for threads run with this authid. Accounting class 2 data is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>In-DB2 Wait Tm</strong></td>
<td>The time spent waiting in DB2. Accounting class 3 data is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
<tr>
<td><strong>Getpage</strong></td>
<td>The number of getpage requests issued.</td>
</tr>
<tr>
<td><strong>GetP/RIO</strong></td>
<td>The ratio of getpage requests to synchronous read I/Os.</td>
</tr>
</tbody>
</table>
Thread History Summary

The Thread History Summary screen provides summary information about thread activity within a report interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- a particular thread, move the cursor to the thread information line, and press the zoom key (PF11)
- related topics, choose on of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the thread summary report displayed.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows YES if thread filter values were used to create this display. Otherwise, NO is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>End Time</td>
<td>The end time of the DB2 thread execution.</td>
</tr>
<tr>
<td>Plan</td>
<td>The DB2 plan name.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the threads.</td>
</tr>
<tr>
<td>Elapsed Time</td>
<td>The total elapsed time for the thread.</td>
</tr>
<tr>
<td>CPU Time</td>
<td>The total CPU time for the thread.</td>
</tr>
<tr>
<td>SQL</td>
<td>The number of SQL calls issued.</td>
</tr>
</tbody>
</table>

Parallel Processing Identifiers

For DB2 Version 4 and above, an asterisk (*) or P is displayed after the end time if this thread was involved with parallel processing.

* Indicates the thread was a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread was the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.
Thread History Summary

Commit
The number of commits performed by the thread.

Abrt
The number of aborts performed by the thread.

Pkg
The number of package and/or DBRM executions for the thread. Accounting classes 7, 8 are required. Displays N/A if accounting classes 7 and 8 are not available.

Term Status
The status indicating the reason for thread termination. The following is a list of values that are displayed; only the first six characters of the actual termination reason is displayed because of space. Status values representing normal termination are displayed so as not to clutter the screen. All values are displayed in full on the thread history detail screen (ZHTACT).

- EOT/AB
- EOM/AB
- RES/IN
- FORCE
- IEOT/T
- IEOT/A
- IEOM/A
- IFORCE

Note: Sort blanks last for this field.
Thread History Buffer Pool Summary

The Thread History Buffer Pool Summary screen provides summary information about thread buffer pool activity within a report interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular thread, move the cursor to the thread information line, and press the zoom key (PF11)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the thread summary report displayed.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows YES if thread filter values were used to create this display. Otherwise, NO is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>End Time</td>
<td>The end time of the DB2 thread execution.</td>
</tr>
</tbody>
</table>

Parallel Processing Identifiers

For DB2 Version 4 and above, an asterisk (*) or P is displayed after the end time if this thread was involved with parallel processing.

* Indicates the thread was a parallel task generated by an originating thread to process a query request in parallel.

P Indicates the thread was the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The DB2 plan name.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the threads.</td>
</tr>
<tr>
<td>Getpage</td>
<td>The number of getpage requests issued.</td>
</tr>
<tr>
<td>Read I/O</td>
<td>The number of synchronous read I/Os performed.</td>
</tr>
<tr>
<td>GetP/RIO</td>
<td>The ratio of getpage requests to synchronous read I/Os.</td>
</tr>
<tr>
<td>Pfetch</td>
<td>The number of prefetch requests issued.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Update</strong></td>
<td>The number of buffer pool page updates performed.</td>
</tr>
<tr>
<td><strong>Immed Write</strong></td>
<td>The number of immediate (synchronous) writes performed.</td>
</tr>
</tbody>
</table>
Thread History DB2 Time Summary

The Thread History DB2 Time Summary screen provides a summary of thread in-DB2 times for a selected report interval.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- a particular thread, move the cursor to the thread information line, and press the zoom key (PF11)
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the thread summary report displayed.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows YES if thread filter values were used to create this display. Otherwise, NO is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>End Time</td>
<td>The end time of the DB2 thread execution.</td>
</tr>
<tr>
<td>Parallel Processing Identifiers</td>
<td>For DB2 Version 4 and above, an asterisk (*) or P is displayed after the end time if this thread was involved with parallel processing.</td>
</tr>
<tr>
<td>*</td>
<td>Indicates the thread was a parallel task generated by an originating thread to process a query request in parallel.</td>
</tr>
<tr>
<td>P</td>
<td>Indicates the thread was the parent, or originating thread, of the parallel task(s) created to process a query request in parallel. Activity performed for this thread by the parallel tasks is reflected under the parallel task (*), not the originating thread.</td>
</tr>
<tr>
<td>Plan</td>
<td>The DB2 plan name.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the threads.</td>
</tr>
<tr>
<td>In-DB2 Elap Tm</td>
<td>The elapsed time spent in DB2. Accounting class 2 is required. Displays N/A if accounting class 2 data is not available.</td>
</tr>
<tr>
<td>In-DB2 CPU Tm</td>
<td>The CPU time spent in DB2. Accounting class 2 is required. Displays N/A if accounting class 2 data not available.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Waits</strong></td>
<td>The total number of waits in DB2. Accounting class 3 is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
<tr>
<td><strong>Wait Time</strong></td>
<td>The time spent waiting in DB2. Accounting class 3 is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
<tr>
<td><strong>I/O Waits</strong></td>
<td>The total number of waits for I/O. Accounting class 3 is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
<tr>
<td><strong>I/O Wait Tm</strong></td>
<td>The time spent waiting for I/O. Accounting class 3 is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
</tbody>
</table>
Thread History DB2 Lock/Scan/Sort Summary

The Thread History DB2 Lock/Scan/Sort Summary screen provides a summary of thread lock, sort, and scan information for a selected report interval.

Highlighting
OMEGAMON II does not highlight any fields on this screen.

Navigation
For additional information about a particular thread, move the cursor to the thread information line, and press the zoom key (PF11)

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields
Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Interval</td>
<td>The time of the thread summary report displayed.</td>
</tr>
<tr>
<td>Start</td>
<td>The start date and time of the interval currently displayed.</td>
</tr>
<tr>
<td>Report Filtered</td>
<td>This field shows YES if thread filter values were used to create this display. Otherwise, NO is displayed.</td>
</tr>
<tr>
<td>End</td>
<td>The end time of the interval currently displayed.</td>
</tr>
<tr>
<td>End Time</td>
<td>The end time of the DB2 thread execution.</td>
</tr>
<tr>
<td>Parallel Processing Identifiers</td>
<td>For DB2 Version 4 and above, an asterisk (*) or P is displayed after the end time if this thread was involved with parallel processing.</td>
</tr>
<tr>
<td>Plan</td>
<td>The DB2 plan name.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the threads.</td>
</tr>
<tr>
<td>Locks</td>
<td>The number of IRLM lock requests issued.</td>
</tr>
<tr>
<td>DLk/TOut</td>
<td>The number of deadlocks and timeouts occurred.</td>
</tr>
<tr>
<td>Lock Waits</td>
<td>The total number of waits because of lock or latch suspension. Accounting class 3 is required. Displays N/A if accounting class 3 data is not available.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Lock WaitTm</strong></td>
<td>The time spent waiting as a result of lock or latch suspension. Accounting class 3 is required. Displays <strong>N/A</strong> if accounting class 3 data is not available.</td>
</tr>
<tr>
<td><strong>TS Scan</strong></td>
<td>The number of tablespace scans. Scan data required. Displays <strong>N/A</strong> if sort data is not available.</td>
</tr>
<tr>
<td><strong>Sort</strong></td>
<td>The number of sorts performed. Sort data required. Displays <strong>N/A</strong> if sort data is not available.</td>
</tr>
<tr>
<td><strong>Recs Sorted</strong></td>
<td>The total number of records sorted. Sort data required. Displays <strong>N/A</strong> if sort data is not available.</td>
</tr>
</tbody>
</table>
Thread History Detail

The Thread History Detail screen provides detail information about the activity of a completed thread or parallel task (DB2 version 4 only). A parallel task is a subtask that is created from an originating thread to process a part of a query.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
</tbody>
</table>

**Attachment Identifier**

**Connection Type**

The first field shows the type of connection:

- **TSO**  
  TSO foreground and background
- **CALLATCH**  
  DB2 call attach
- **DLI**  
  DL/I batch
- **CICS**  
  CICS attach
- **IMSBMP**  
  IMS attach BMP
- **IMSMPP**  
  IMS attach MPP
- **IMSCtrl**  
  IMS control region
- **IMSBMPB**  
  IMS transaction BMP
- **RRSAF**  
  Recoverable Resource Manager Services Attachment Facility
- **SYSDIR**  
  System directed access (data base access threads)
- **APPLDIR**  
  Application directed access (data base access threads)
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**

- **Distributed Allied** A requesting thread; one that has issued an SQL call to a remote DB2 location.
- **Database Access** A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

\[
\text{luw-id}=\text{token}
\]

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

\[
\text{USCACO01.O2D22A.A1FE8E04B9D4}=8
\]

**Time Identifier**

- **Start** The start date and time of this thread execution.
- **End** The end date and time of this thread execution.
### Data Fields

**Termination Status**
The status indicating the reason for thread termination:
- READS
- RESIGNON
- NEWUSER
- DDFINACT
- DEALLOC
- EOT/TERM
- EOT/ABND
- EOM/ABND
- RES/INDT
- FORCE
- IEOT/TRM
- IEOT/ABN
- IEOM/ABN
- IFORCE

**Commits**
The number of commits performed by the thread.

**Aborts**
The number of aborts performed by the thread.

**Total Elapsed Time**
The total elapsed time for the thread in the format hh:mm:ss.th.

**Total CPU Time**
The total amount of CPU time accumulated for the thread. This value includes only MVS TCB time. SRB time is not included.

**Parallel Tasks**
The total number of parallel tasks that were created on behalf of this thread. This field appears only for DB2 Version 4 and above.

**Total Stored Proc CPU**
The total amount of CPU time (TCB time) spent processing SQL CALL statements in the DB2 stored procedures address space. This field appears only for DB2 Version 4 and above.

### In-DB2 Times

**Note:** In-DB2 Times require an Accounting Class 2 trace. Displays N/A if this DB2 trace was not active.

**Elapsed Time**
The elapsed time spent in DB2 for the thread in the format hh:mm:ss.th.

**CPU Time**
The in-DB2 CPU time accumulated for the thread. This includes only TCB time. SRB time is not included.

**Stored Procedure CPU Time**
The amount of CPU (TCB) time spent in DB2 processing SQL CALL statements issued from stored procedures for this thread. This field appears only for DB2 Version 4 and above.
**In-DB2 Waits**

Wait times require an Accounting Class 3 trace. Displays **N/A** if this DB2 trace was not active. Two values are provided for the Class 3 fields:

- Time displays the total wait time that has elapsed
- Count displays the total number of waits.

<table>
<thead>
<tr>
<th>Wait</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronous I/O Wait</td>
<td>Wait for synchronous I/O reads or writes.</td>
</tr>
<tr>
<td>Asynchronous Read I/O Wait</td>
<td>Wait for read I/O performed under another thread (e.g., list or sequential prefetch).</td>
</tr>
<tr>
<td>Asynchronous Write I/O Wait</td>
<td>Wait for write I/O performed under another thread (e.g. deferred writes).</td>
</tr>
<tr>
<td>Lock/Latch Wait</td>
<td>Wait for locks or latches.</td>
</tr>
<tr>
<td>Drain Lock Wait</td>
<td>Wait to acquire drain locks.</td>
</tr>
<tr>
<td>Drain of Claims Wait</td>
<td>Wait for claims to be released after acquiring drain lock.</td>
</tr>
<tr>
<td>Global Lock Wait</td>
<td>Wait for global lock in a data sharing environment. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Inter-System Message Send Wait</td>
<td>Wait for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>DB2 Service Task Wait</td>
<td>Wait for DB2 services. Types of DB2 services include open/close of dataset, DFHSM recall of a dataset, SYSLGRNG update, or define/extend/delete of dataset, commit phase 2 for read only threads.</td>
</tr>
<tr>
<td>Archive Log Mode(Quiesce) Wait</td>
<td>Wait for ARCHIVE LOG MODE(QUIESCE) command to complete.</td>
</tr>
<tr>
<td>Archive Read from Tape Wait</td>
<td>Waits for reads of archive log from tape.</td>
</tr>
<tr>
<td>Stored Procedure Schedule Wait</td>
<td>Wait for an available TCB for scheduling a stored procedure. This field appears only for DB2 Version 4 and above.</td>
</tr>
</tbody>
</table>
Thread History Lock Waits

The Thread History Lock Waits screen provides detailed information about lock waits that occurred for a thread.

Thread data must be collected by the online historical collector with the LOCKCONT(YES) or LOCKSUSP(YES) keywords. Otherwise, the panel displays a message that lock wait information is not available for a thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose on of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

- **Plan**  The DB2 plan name of the thread.
- **Connid**  The DB2 connection identifier of the thread.
- **Corrid**  The DB2 correlation identifier of the thread.
- **Authid**  The DB2 authorization identifier of the thread.

**Attachment Identifier**

**Connection Type**  The connection type appears in the first field:

- **TSO**  TSO foreground and background
- CALLATCH  DB2 call attach
- **DLI**  DL/I batch
- **CICS**  CICS attach
- **IMSBMP**  IMS attach BMP
- **IMSMPP**  IMS attach MPP
- **IMSCtrl**  IMS control region
- **IMSBMPB**  IMS transaction BMP
- **RRSAF**  Recoverable Resource Manager Services Attachment Facility
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Distributed Thread Identifier**

The thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Time Identifier**

The start date and time of this thread execution.

The end date and time of this thread execution.

**Lock Contention (Timeout)**

This section appears only when the thread execution ended due to a lock timeout and lock contention data was collected.

**Resource**

The DB2 resource that was requested by the timed-out thread that was waiting for the resource. The resource varies depending upon the type of lock requested. This field displays the following resources:

**Lock Type**

The type of lock that is owned or requested and is unavailable.

**ALBP**

Alter buffer pool lock. BP=buffer pool ID

**BIND**

Autobind/remote bind lock.

**CCAT**

CATMAINT convert catalog lock.

**SYSDIR**

System directed access (data base access threads)

**APPLDIR**

Application directed access (data base access threads)

**DB2**

The DB2 subsystem identifier.

**MVS**

The MVS system identifier.

**Origauth**

The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Luwid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

luw-id=token

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

USCACO01.O2D22A.A1FE8E04B9D4=8
Thread History Lock Waits

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDIR</td>
<td>CATMAINT convert directory lock.</td>
<td></td>
</tr>
<tr>
<td>CDRN</td>
<td>Cursor Stability drain lock</td>
<td>DB=database name, PS=pageset name, PT=partition</td>
</tr>
<tr>
<td>CMIG</td>
<td>CATMAINT migration lock.</td>
<td></td>
</tr>
<tr>
<td>COLL</td>
<td>Collection lock.</td>
<td>COLL=collection ID</td>
</tr>
<tr>
<td>DBEX</td>
<td>Database exception LPL/GRECP lock.</td>
<td></td>
</tr>
<tr>
<td>DBXU</td>
<td>DB exception update lock.</td>
<td></td>
</tr>
<tr>
<td>DPAG</td>
<td>Page lock in a tablespace.</td>
<td>DB=database name, PS=pageset name, PG=page</td>
</tr>
<tr>
<td>DSET</td>
<td>Dataset locking.</td>
<td>DB=database name, PS=pageset name, PT=partition</td>
</tr>
<tr>
<td>DTBS</td>
<td>Database lock.</td>
<td>DB=database name, PS=pageset name, PT=partition</td>
</tr>
<tr>
<td>GRBP</td>
<td>Group buffer pool start/stop lock.</td>
<td>BP=buffer pool ID</td>
</tr>
<tr>
<td>HASH</td>
<td>Hash anchor lock.</td>
<td>DB=database name, PS=pageset name, PG=page</td>
</tr>
<tr>
<td>IEOF</td>
<td>Index IEOF.</td>
<td>DB=database name, PS=pageset name, PT=partition</td>
</tr>
<tr>
<td>IPAG</td>
<td>Page lock in an indexspace.</td>
<td>DB=database name, PS=pageset name, PG=page</td>
</tr>
<tr>
<td>MDEL</td>
<td>Mass delete lock.</td>
<td>DB=database name, PS=pageset name</td>
</tr>
</tbody>
</table>
PBPC  Group Bp level castout P-lock.
PCDB  DDF CDB P-lock.
PDBD  PDBD P-lock.
PDSO  Pageset or dataset open lock.
  ■ DB=database name
  ■ PS=pageset name
PITR  Index manager tree P-lock.
  ■ DB=database name
  ■ PS=pageset name
  ■ PT=partition
PPAG  Page P-lock.
PPSC  Pageset/partition level castout P-lock.
PPSP  Pageset/partition P-lock.
PRLF  RLF P-lock.
PSET  Pageset lock.
  ■ DB=database name
  ■ PS=pageset name
PSPI  Pageset piece lock.
  ■ DB=database name
  ■ PS=pageset name
RDRN  Repeatable read drain lock.
  ■ DB=dataset name
  ■ PS=pageset name
  ■ PT=partition
RSTR  SCA access for restart/redo lock.
BMC-RSTP
ROW  Row lock.
SDBA  Start/stop lock on DBA table.
  ■ DB=dataset name
  ■ PS=pageset name
SKCT  Skeleton cursor table lock.
  PLAN=plan name
SKPT  Skeleton package table.
  ■ COLL=collection ID
  ■ PKG=package name
SREC  Log range lock.
  ■ DB=database name
  ■ TS=tablespace name
This section provides information about the lock that ended due to timeout. This section includes the following information:

**Lock Level**
The level or mode of the lock request. This information describes the level of resource access demanded by the lock request. Possible lock levels are:
- IS  Intent share
- IX  Intent exclusive
- NSU Nonshared update
- S   Share
- SIX Share intent exclusive
- U   Update
- UNS Unprotected share
- X   Exclusive

**Duration**
The duration of the requested lock. Possible duration categories are:
- **Allocation**
  Lock is held until thread terminates or until plan is deallocated.
- **Commit**
  Lock is held until commit is processed.
- **Commit+1**
  Lock is held until commit is processed, unless needed to maintain the position of the cursor that is opened with hold.
- **Free**
  Duration to free all locks.

**Table lock.**
- DB=database name
- PS=pageset name

**Resource ID (in hexadecimal).**

**Utility exclusive execution lock.**

**Utility UID lock.**

**Utility serialization lock.**

**Write drain lock.**
- DB=database name
- PS=pageset name
- PT=partition
Interest
Lock is held as long as DB2 has interest in the resource. This duration is used only for P-locks.

Manual
A lock of short duration that DB2 acquires in order to perform tasks such as authorization checking.

Manual+1
A lock of short duration that DB2 acquires in order to temporarily change from CS to RR during bind or DDL.

Plan
Lock is held until plan is deallocated.

Undetermined
Lock is held for undetermined duration.

IRLM Function
The type of request to IRLM. The possible request types are:

Lock
Unlock
Change

Request Type
The type of lock request, either conditional or unconditional.

Own
Lock ownership information. This section provides detailed information about the holder(s) of incompatible locks on the resource that was requested by the timed-out thread. Following are the fields for this section:

Plan
The plan name of the lock owner(s).

Connid
The connection identifier(s) of the lock owner(s).

Corrid
The correlation identifier of the lock owner(s).

Luwid
The Logical Unit-of-Work identifier. This field is displayed only for DBAT threads.

Lock Level
The level of the lock. (See possible lock levels listed for the Wait section, above).

Duration
The duration of the thread(s) holding incompatible locks.

PWait
Priority waiter information. This section provides detailed information about any threads that were priority waiters for the resource during the lock request timeout. For explanations of fields, see the descriptions in the Own section, above.

Plan
The plan name of the priority waiter.

Connid
The connection identifier(s) of the priority waiter.

Corrid
The correlation identifier of the priority waiter.

Luwid
The logical unit-of-work identifier. This field is displayed only for DBAT threads.

Lock Level
The level of the lock. For a list of lock levels see the Wait section, above.

Duration
Indicates the duration of the requested lock. For a list of duration values, see the Wait section above.
Lock Contention (Deadlock)
Deadlock information is displayed only when the thread ended due to a deadlock.

**Time of Deadlock**  The time that the locking deadlock occurred.

**Deadlock Interval**  The DB2 deadlock detection interval.

**Resource**  The DB2 resource that was requested by the deadlocked thread (see table above). The resource format varies depending upon the type of lock requested.

**Wait**  See Wait fields described under Timeout section above.

**Own**  See Own fields described under Timeout section above.

**DBMS Subsystem ID**  The database management subsystem identifier.

Lock Suspension
Lock suspension information is displayed only when lock suspension data was collected.

**Time**  The time that the lock was suspended.

**Resource**  The name of the resource for which the lock suspension occurred. The contents of this field depend on the Lock Type (see table above).

**Type**  The type of lock requested. This field determines the contents of the resource name (see table above).

**Lvl**  The level of the lock.

**Dur**  The duration of the requested lock. For a list of duration values, see the Wait section above.

**Elapsed**  The elapsed time (in seconds) for each suspended lock that was resumed.

**Resume**  The reason why the lock suspension was resumed. Possible reasons:

<table>
<thead>
<tr>
<th>Resume</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEADLK</td>
<td>Deadlock</td>
</tr>
<tr>
<td>IDENT</td>
<td>Identify to IRLM</td>
</tr>
<tr>
<td>NORMAL</td>
<td>Normal resume</td>
</tr>
<tr>
<td>TIMOUT</td>
<td>Timeout</td>
</tr>
</tbody>
</table>
Thread History Lock/Claim/Drain Activity

The Thread History Lock /Claim/Drain Activity screen provides lock/claim/drain statistics such as the number of requests to acquire a lock and the number of pages that were locked for a thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

Thread Identifier

Plan The DB2 plan name of the thread.
Connid The DB2 connection identifier of the thread.
Corrid The DB2 correlation identifier of the thread.
Authid The DB2 authorization identifier of the thread.

Attachment Identifier

Connection Type The connection type appears in the first field:
TSO TSO foreground and background
CALLATCH DB2 call attach
DLI DL/I batch
CICS CICS attach
IMSBMP IMS attach BMP
IMSMPP IMS attach MPP
IMSCtrl IMS control region
IMSBMPB IMS transaction BMP
RRSAF Recoverable Resource Manager Services Attachment Facility
SYSDIR System directed access (data base access threads)
APPLDIR Application directed access (data base access threads)
Thread History Lock/Claim/Drain Activity

**DB2**

The DB2 subsystem identifier.

**MVS**

The MVS system identifier.

**Origauth**

The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**

The distributed thread type.

- **Distributed Allied**
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**
  A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**Time Identifier**

**Start**

The start date and time of this thread execution.

**End**

The end date and time of this thread execution.
Thread History Lock/Claim/Drain Activity

Lock/Claim/Drain

Lock Requests
Requests to IRLM to obtain a lock on a resource.

Deadlocks Detected
The number of deadlocks detected.

Unlock Requests
Requests to IRLM to unlock a resource.

Timeouts Detected
Occasions when suspension of a unit of work lasted longer than the IRLM timeout value.

Query Requests
Requests to IRLM to query a lock.

Change Requests
Requests to IRLM to change a lock.

Suspends - Latch Only
DB2 internal latch suspensions.

Other IRLM Requests
Requests to IRLM to perform a function other than those listed above.

Suspends - Other
Suspensions caused by something other than locks and latches.

Lock Escalations - to Shared
Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IS) lock to escalate to a shared (S) lock.

Lock Escalations - to Exclusive
Occasions when the allowable number of locks per tablespace was exceeded, causing a page (IX) lock to escalate to an exclusive (X) lock.

Maximum Page/Row Locks
The maximum number of page locks held concurrently during the thread’s execution. This count cannot exceed the value of the NUMLKUS (locks per user) installation parameter.

Claim/Drain Information

Claim Requests
The number of requests for a claim on a resource.

Claims Failed
The number of unsuccessful claim requests.

Drain Requests
The number of requests for a drain of claims.

Drains Failed
The number of unsuccessful drain requests.
Thread History Global Lock Activity

The Thread History Global Lock Activity screen provides information about global locking activity for an individual thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

OMEGAMON II identifies the thread to which the information on this screen applies.

- **Plan**: The DB2 plan name of the active thread.
- **Connid**: The DB2 connection identifier of the active thread.
- **Corrid**: The DB2 correlation identifier of the active thread.
- **Authid**: The DB2 authorization identifier of the active thread.

**Attachment Identifier**

This information changes depending upon the type of connection:

- **Batch**: The MVS jobname and ASID.
- **CICS**: The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:
  - **Pool**: The thread in use is a pool thread.
  - **Enty**: The thread in use is a nonprotected entry thread.
  - **Prot**: The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.
- **IMS**: The IMS region number, transaction name, region name, and terminal ID (LTERM).
- **TSO**: The TSO user ID and region ASID.
- **System**: The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.
**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>The distributed thread type.</td>
</tr>
<tr>
<td><strong>Distributed Allied</strong></td>
<td>A requesting thread; one that has issued an SQL call to a remote DB2 location.</td>
</tr>
<tr>
<td><strong>Database Access</strong></td>
<td>A server thread; one that has received and is serving an SQL request from a remote DB2 location.</td>
</tr>
</tbody>
</table>

**Luwid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**Global Lock Information**

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-lock Lock Requests</td>
<td>Number of lock requests for P-locks. A P-lock is a logical lock used to control intra- and inter-DB2 data concurrency between transactions.</td>
</tr>
<tr>
<td>XES Lock Requests</td>
<td>The number of lock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests. Only the most restrictive lock for a particular resource is propagated to XES and the coupling facility.</td>
</tr>
<tr>
<td>P-lock Unlock Requests</td>
<td>Number of unlock requests for P-locks.</td>
</tr>
<tr>
<td>XES Unlock Requests</td>
<td>The number of unlock requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td>P-lock Change Requests</td>
<td>Number of change requests for P-locks.</td>
</tr>
<tr>
<td>XES Change Requests</td>
<td>The number of change requests (both logical and physical) that are propagated to MVS XES synchronously under the caller's execution unit. This count does not include suspended requests.</td>
</tr>
<tr>
<td>Suspends - IRLM Global Cont</td>
<td>The number of suspends due to IRLM global resource contentions. IRLM lock states were in conflict and inter-system communication is required to resolve the conflict.</td>
</tr>
<tr>
<td>Total L-lock Requests</td>
<td>The total number of L-lock requests. An L-lock is a logical lock used to control intra- and inter-DB2 data concurrency between transactions.</td>
</tr>
<tr>
<td>Suspends - XES Global Cont</td>
<td>The number of suspends due to MVS XES global resource contentions that were not IRLM-level contentions. The XES lock states were in conflict, but the IRLM lock states were not.</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>XES L-lock Req Percentage</td>
<td>The percentage of total L-lock requests that were propagated to MVS XES synchronously.</td>
</tr>
<tr>
<td>Suspends - False Contention</td>
<td>The number of suspends caused by MVS XES false contentions. XES detects hash class contention when two different locks on different resources hash to the same entry in the coupling facility lock table. The requester is suspended until it is determined that there is no real lock contention.</td>
</tr>
<tr>
<td>Incompatible Retained Locks</td>
<td>The number of global lock or change requests that failed because of an incompatible retained lock. Certain P-locks can be retained because of a system failure. Another DB2 member cannot access the data that the retained P-lock is protecting unless it requests a P-lock in a compatible state.</td>
</tr>
<tr>
<td>False Contention Percentage</td>
<td>The rate of false contentions to real contentions. This number should be no more than 50%.</td>
</tr>
<tr>
<td>Notify Messages Sent</td>
<td>The number of notify messages sent.</td>
</tr>
</tbody>
</table>
The Thread History SQL Counts screen provides information about SQL calls that were issued by a completed thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

- **Plan**
  - The DB2 plan name of the thread.
- **Connid**
  - The DB2 connection identifier of the thread.
- **Corrid**
  - The DB2 correlation identifier of the thread.
- **Authid**
  - The DB2 authorization identifier of the thread.

**Attachment Identifier**

**Connection Type**

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSO</td>
<td>TSO foreground and background</td>
</tr>
<tr>
<td>CALLATCH</td>
<td>DB2 call attach</td>
</tr>
<tr>
<td>DLI</td>
<td>DL/I batch</td>
</tr>
<tr>
<td>CICS</td>
<td>CICS attach</td>
</tr>
<tr>
<td>IMSBMP</td>
<td>IMS attach BMP</td>
</tr>
<tr>
<td>IMSMPP</td>
<td>IMS attach MPP</td>
</tr>
<tr>
<td>IMSCTRL</td>
<td>IMS control region</td>
</tr>
<tr>
<td>IMSBMPB</td>
<td>IMS transaction BMP</td>
</tr>
<tr>
<td>RRSAF</td>
<td>Recoverable Resource Manager Services Attachment Facility</td>
</tr>
<tr>
<td>SYSDIR</td>
<td>System directed access (database access threads)</td>
</tr>
<tr>
<td>APPLDIR</td>
<td>Application directed access (database access threads)</td>
</tr>
<tr>
<td>DB2</td>
<td>The DB2 subsystem identifier</td>
</tr>
</tbody>
</table>
Thread History SQL Counts

**MVS**
The MVS system identifier.

**Origauth**
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**
The distributed thread type.

- **Distributed Allied**
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**
  A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

\[
\text{luw-id}=\text{token}
\]

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

\[
\text{USCACO01.O2D22A.A1FE8E04B9D4}=8
\]

**Time Identifier**

- **Start**
The start date and time of this thread execution.

- **End**
The end date and time of this thread execution.

**SQL Counts**

- **Commit**
The number of times the thread successfully concluded commit phase 2 processing.

- **Abort**
The number of times the thread has rolled back uncommitted data.

- **Select**
The number of SQL SELECT requests.

- **Open Cursor**
The number of SQL OPEN cursor statements executed by the thread.

- **Close Cursor**
The number of SQL CLOSE cursor statements executed by the thread.

- **Fetch**
The number of SQL FETCH requests.

- **Insert**
The number of SQL INSERT statements executed by the thread.

- **Delete**
The number of SQL DELETE statements executed by the thread.

- **Update**
The number of SQL UPDATE statements executed by the thread.

- **Describe**
The number of SQL DESCRIBE statements executed by the thread.
<table>
<thead>
<tr>
<th><strong>Thread History SQL Counts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lock Table</strong></td>
</tr>
<tr>
<td><strong>Prepare</strong></td>
</tr>
<tr>
<td><strong>Create/Drop</strong></td>
</tr>
<tr>
<td><strong>Alter</strong></td>
</tr>
<tr>
<td><strong>Grant/Revoke</strong></td>
</tr>
<tr>
<td><strong>Increm Bind</strong></td>
</tr>
<tr>
<td><strong>Label/Comm On</strong></td>
</tr>
<tr>
<td><strong>Set SQLID</strong></td>
</tr>
<tr>
<td><strong>Set Host Var</strong></td>
</tr>
<tr>
<td><strong>Set Connection</strong></td>
</tr>
<tr>
<td><strong>Set Degree</strong></td>
</tr>
<tr>
<td><strong>Connect Type 1</strong></td>
</tr>
<tr>
<td><strong>Connect Type 2</strong></td>
</tr>
<tr>
<td><strong>Release</strong></td>
</tr>
<tr>
<td><strong>Set Rules</strong></td>
</tr>
<tr>
<td><strong>Call</strong></td>
</tr>
</tbody>
</table>

**RID Pool Activity**

| **RID Pool Used** | The number of times that RID list processing was used for the thread. |
| **RID Pool Use Failed/No Storage** | The number of times that RID list processing was not used because no storage was available to hold the list of RIDs. |
| **RID Pool Use Failed/Max Limit** | The number of times that RID list processing was not used because the number of RIDs exceeded an internal limit. |
### I/O Parallelism

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Parallel Degree</td>
<td>The maximum degree of parallel I/O processing for the thread.</td>
</tr>
<tr>
<td>Parallel Groups Executed</td>
<td>The number of parallel groups that were executed by the thread.</td>
</tr>
<tr>
<td>Parallel Failed/Cursor</td>
<td>The number of parallel groups that fell back to sequential mode because a</td>
</tr>
<tr>
<td></td>
<td>cursor allowed update or delete.</td>
</tr>
<tr>
<td>Parallel Failed/No ESA Sort</td>
<td>The number of parallel groups that fell back to sequential mode because</td>
</tr>
<tr>
<td></td>
<td>there was no ESA sort support.</td>
</tr>
<tr>
<td>Parallel Failed/Buffers</td>
<td>The number of parallel groups that fell back to sequential mode because</td>
</tr>
<tr>
<td></td>
<td>there was a storage shortage or buffer pool contention.</td>
</tr>
<tr>
<td>Parallel Failed-No ESA Enclaves</td>
<td>The total number of parallel groups that fell back to sequential processing</td>
</tr>
<tr>
<td></td>
<td>because MVS/ESA enclave services were unavailable.</td>
</tr>
<tr>
<td></td>
<td>This field appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Parallelism Disabled</td>
<td>YES indicates that query parallelism is disabled by the Resource Limit</td>
</tr>
<tr>
<td></td>
<td>Facility for at least one dynamic SQL SELECT statement. This field</td>
</tr>
<tr>
<td></td>
<td>appears only for DB2 Version 4 and above.</td>
</tr>
<tr>
<td>Parallel Degree Reduced/Buffers</td>
<td>The number of parallel groups that were processed to a degree less than</td>
</tr>
<tr>
<td></td>
<td>the planned degree because there was a shortage of storage or buffer pool</td>
</tr>
<tr>
<td></td>
<td>contention.</td>
</tr>
<tr>
<td>Parallel Degree Executed</td>
<td>The number of parallel groups that were executed at the planned degree.</td>
</tr>
</tbody>
</table>

### Stored Procedures

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Call Statements</td>
<td>The number of SQL CALL statements executed by the thread.</td>
</tr>
<tr>
<td>SQL Call Time Out</td>
<td>The number of times an SQL CALL timed out waiting to be scheduled when there</td>
</tr>
<tr>
<td></td>
<td>was no available TCB in the stored procedures address space.</td>
</tr>
<tr>
<td>Stored Proc SQL Reqs</td>
<td>The number of SQL requests issued from a DB2 stored procedure.</td>
</tr>
<tr>
<td>SQL Calls Rejected</td>
<td>The number of times an SQL CALL was rejected because the procedure was in</td>
</tr>
<tr>
<td></td>
<td>the STOP ACTION(REJECT) state.</td>
</tr>
<tr>
<td>Stored Procedures Abended</td>
<td>The number of times a stored procedure terminated abnormally.</td>
</tr>
</tbody>
</table>
Thread History Dynamic SQL Calls

The Thread History Dynamic SQL Calls screen provides information about dynamic SQL calls that were issued by a completed thread.

You must specify keyword DYNAMICSQL(YES) when collecting thread data; otherwise, the panel displays a message indicating that dynamic SQL information is not available for the thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
</tbody>
</table>

Attachment Identifier

The connection type appears in the first field:

- **TSO**: TSO foreground and background
- **CALLATCH**: DB2 call attach
- **DLI**: DL/I batch
- **CICS**: CICS attach
- **IMSBMP**: IMS attach BMP
- **IMSMPP**: IMS attach MPP
- **IMSCtrl**: IMS control region
- **IMSBMPB**: IMS transaction BMP
- **RRSAF**: Recoverable Resource Manager Services Attachment Facility
Thread History Dynamic SQL Calls

**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

- **Type**: The distributed thread type.
  - **Distributed Allied**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
  - **Database Access**: A server thread; one that has received and is serving an SQL request from a remote DB2 location.

- **Luwid**: This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

  luw-id=token

  The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

  USCACO01.O2D22A.A1FE8E04B9D4=8

- **Start**: The start date and time of this thread execution.
- **End**: The end date and time of this thread execution.

**Miniplan**

**Select Call**: Specifies the next SQL statement that is displayed. Initially this panel displays the first SQL statement that was collected for the thread. Use these keywords to control the display:

- **FIRST**: First SQL statement encountered for the thread.
- **LAST**: Last SQL statement encountered for the thread.
- **NEXT**: Next SQL statement encountered for the thread.
- **PREV**: Previous statement encountered for the thread.
- **+nnnnn**: The nnnnn (1-99999) entry after the currently displayed SQL statement.
-nnnnn  The nnnnn (1-99999) entry before the currently displayed SQL statement.

Snnnnn  Statement number nnnnn.

**Plan #**  The plan for a select block within the prepared SQL statement.

**Estimated Cost**  The cost factor for this SQL statement, generated by the DB2 Optimizer.

**Table**  The name of the table that was accessed.

**Access Type**  The method by which the table was accessed. Possible values are:

- **Index**  Index was used to access table data.
- **Index (One-Fetch)**  Index was used to determine which data page is needed for processing. This type of access is used for processing MIN and MAX functions.
- **Index (IN keyword)**  Index was used to access table data for processing the IN keyword in SQL statements.
- **Index (Page Range)**  Index will be used to access table data in a particular page range.
- **Sequential Scan (Page Range)**  All pages within a particular page range of the partitioned tablespace will be accessed sequentially.
- **Sequential Scan**  All pages in the tablespace (or table if the tablespace is segmented) were accessed sequentially.

**Join Method**  The type of join being performed. Possible values:

- Nested Loops
- Hybrid
- Merge Scan

**Table Type**  Indicates whether the table was the INNER or OUTER table for the join processing.

**Prefetch Activity**  The type of prefetch activity performed. If no prefetch was performed, this field will not appear. Possible values are:

- **Sequential**  Sequential prefetch.
- **List**  List prefetch for one or more indexes.

**Sort Activity**  The reason for the sort. If no sort was performed, this field will not appear. Possible values are:

- **Uniq**  Sort to remove duplicate rows.
- **Join**  Sort needed for join processing.
- **Order**  Sort needed to satisfy Order By clause.
- **Group**  Sort needed to satisfy Group By clause.
- **Uniq(C)**  Sort to remove duplicate rows (composite table).
- **Join(C)**  Sort needed for join processing (composite table).
- **Order(C)**  Sort needed to satisfy Order By clause (composite table).
**Group(C)**

Sort needed to satisfy Group By clause (composite table).

**Prefetch Activity**
The type of prefetch activity being performed. If no prefetch is performed, this field will not appear. Possible values are:

- **Sequential**: Sequential prefetch.
- **List**: List prefetch for one or more indexes.

**Access Degree**
The degree of parallelism used by the query. This is the number of parallel I/O streams determined by the optimizer at PREPARE time. The actual number of I/O streams used at execution time may be different.

**Access Group ID**
The parallel group identifier used for accessing the new table. This is the identifier for a group of consecutive parallel operations. These parallel operations have the same number of I/O streams. The value is determined at PREPARE time and may be changed at execution time.

**Access Type**
The type of parallel processing to be used. Possible values are:

- **CPU**: CPU parallelism
- **I/O**: I/O parallelism

**Join Degree**
The degree of parallelism used in joining the composite table with the new table. This is the number of parallel I/O streams used for the join. The value is set at PREPARE time and may change at execution time.

**Join Group ID**
The value used to identify the parallel group when DB2 joins the composite table with the new table. This is determined at PREPARE time and could be different at execution time.
Thread History Buffer Pool Activity

The Thread History Buffer Pool Activity screen provides information about buffer pool activity for a completed thread.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options at the top of the screen.

- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
</tbody>
</table>

Attachment Identifier

Connection Type

- TSO: TSO foreground and background
- CALLATCH: DB2 call attach
- DLI: DL/I batch
- CICS: CICS attach
- IMSBMP: IMS attach BMP
- IMSMPP: IMS attach MPP
- IMSCTRL: IMS control region
- IMSBMPB: IMS transaction BMP
- RRSAF: Recoverable Resource Manager Services Attachment Facility
- SYSDIR: System directed access (data base access threads)
- APPLDIR: Application directed access (data base access threads)
**Thread History Buffer Pool Activity**

**DB2**
The DB2 subsystem identifier.

**MVS**
The MVS system identifier.

**Origauth**
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distributed Allied</strong></td>
<td>A requesting thread; one that has issued an SQL call to a remote DB2 location.</td>
</tr>
<tr>
<td><strong>Database Access</strong></td>
<td>A server thread; one that has received and is serving an SQL request from a remote DB2 location.</td>
</tr>
</tbody>
</table>

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

\[ \text{luw-id}=\text{token} \]

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

**USCACO01.O2D22A.A1FE8E04B9D4=8**

**Time Identifier**

- **Start**: The start date and time of this thread execution.
- **End**: The end date and time of this thread execution.

**Buffer Pool**

- **Getpage Requests**: The number of thread getpage requests. This value includes conditional, unconditional, successful, and unsuccessful requests. A getpage request may not actually result in physical I/O if the requested page is in the buffer pool.

- **Failed Getpage Requests**: The number of times a conditional getpage request could not be satisfied. A conditional getpage will not wait for a page that is not currently in the buffer pool. A conditional getpage is used with parallel I/O processing only.

- **Synchronous Read I/O**: The number of synchronous read I/O requests issued by the thread.

- **Getpage/Read I/O**: The ratio of getpage requests to the number of synchronous read I/O requests. This value does not include prefetch requests.

- **Page Updates**: The number of times a page in the buffer pool was updated by the thread. This number is incremented each time a page or a row in a page is updated.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sequential Prefetch Requests</strong></td>
<td>The number of sequential prefetch requests issued by the thread. Sequential prefetch read I/O is performed asynchronously to the user's request.</td>
</tr>
<tr>
<td><strong>List Prefetch Requests</strong></td>
<td>The number of list prefetch requests issued by the thread.</td>
</tr>
<tr>
<td><strong>Dynamic Prefetch Requests</strong></td>
<td>The number of dynamic prefetch requests issued by the thread.</td>
</tr>
<tr>
<td><strong>Prefetch Pages Read</strong></td>
<td>The number of pages read asynchronously for prefetch.</td>
</tr>
<tr>
<td><strong>Prefetch Pages in Hiperpool</strong></td>
<td>The number of pages that were found in a hiperpool and moved to the virtual buffer pool as a result of a prefetch request. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Hiperpool Reads</strong></td>
<td>The number of successful synchronous requests to move a page from a hiperpool to a virtual buffer pool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Failed Hiperpool Reads</strong></td>
<td>The number of times the page requested in the hiperpool has been discarded by MVS. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Hiperpool Writes</strong></td>
<td>The number of successful synchronous requests to move a page from a virtual buffer pool to a hiperpool. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Failed Hiperpool Writes</strong></td>
<td>The number of unsuccessful requests to write a page to a hiperpool because of a shortage of expanded storage. (Hiperpools are not supported in DB2 Version 8.1)</td>
</tr>
<tr>
<td><strong>Immediate Writes</strong></td>
<td>The number of immediate (synchronous) write I/O requests issued for a thread.</td>
</tr>
<tr>
<td><strong>BP Hit Percentage</strong></td>
<td>The percentage of getpages for which the data was already in the buffer pool. This field appears only for DB2 Version 4 and above.</td>
</tr>
</tbody>
</table>
Thread History Resource Limit Statistics

The Thread History Resource Limit Statistics screen provides information about resource limits for a completed thread, such as the highest amount of CPU time used by a thread and the number of times each thread exceeded the maximum CPU time limit.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose one of the options at the top of the screen or other topics, use the OMEGAMON II PF keys.

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**
- **Plan**: The DB2 plan name of the thread.
- **Connid**: The DB2 connection identifier of the thread.
- **Corrid**: The DB2 correlation identifier of the thread.
- **Authid**: The DB2 authorization identifier of the thread.

**Attachment Identifier**
- **Connection Type**: The connection type appears in the first field:
  - **TSO**: TSO foreground and background
  - **CALLATCH**: DB2 call attach
  - **DLI**: DL/I batch
  - **CICS**: CICS attach
  - **IMSBMP**: IMS attach BMP
  - **IMSMPP**: IMS attach MPP
  - **IMSCtrl**: IMS control region
  - **IMSBMPB**: IMS transaction BMP
  - **RRSAF**: Recoverable Resource Manager Services Attachment Facility
  - **SYSDIR**: System directed access (database access threads)
  - **APPLDIR**: Application directed access (database access threads)
- **DB2**: The DB2 subsystem identifier.
**MVS**  
The MVS system identifier.

**Origauth**  
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

### Distributed Thread Identifier

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**  
The distributed thread type.

- **Distributed Allied**  
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**  
  A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**  
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

\[
\text{luw-id}=\text{token}
\]

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

\[
\text{USCACO01.O2D22A.A1FE8E04B9D4}=8
\]

### Time Identifier

**Start**  
The start date and time of this thread execution.

**End**  
The end date and time of this thread execution.

### Resource Limit

**Resource Limit Table Name in Use**  
The resource limit specification table used by the DB2 subsystem.

**Resource Limit Origin**  
The origin of the resource limit in effect for this thread, if resource limiting was active.

**Resource Limit in Effect (SUs)**  
The resource limit in MVS service units for the thread.

**Resource Limit CPU Time Per SU**  
The number of CPU seconds per service unit. This is the ratio of the limit in CPU seconds to the limit in service units.

**Resource Limit In Effect (CPU secs)**  
The resource limit in effect in CPU seconds.

**Resource Limit High Water Mark (CPU)**  
The highest amount of CPU time used for dynamic request since the thread was created.

**Ratio of HWM to Resource Limit (CPU)**  
The ratio (in percent) of the high water mark to the CPU resource limit in effect.
Thread History Distributed Activity

The Thread History Distributed Activity screen displays distributed SQL statistics for each remote DB2 location with which the thread has communicated either as a requestor or server.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about related topics, choose on of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread Identifier</td>
<td></td>
</tr>
<tr>
<td>Plan</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
</tbody>
</table>

Attachment Identifier

...
The connection type appears in the first field:

- **TSO** TSO foreground and background
- **CALLATCH** DB2 call attach
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- **CICS** CICS attach
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- **RRSAF** Recoverable Resource Manager Services Attachment Facility

**SYSDIR** System directed access (data base access threads)

**APPLDIR** Application directed access (data base access threads)

The DB2 subsystem identifier.

The MVS system identifier.

The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

- **Type** The distributed thread type.
- **Distributed Allied** A requesting thread; one that has issued an SQL call to a remote DB2 location.
- **Database Access** A server thread; one that has received and is serving an SQL request from a remote DB2 location.
- **Luwid** This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

  luw-id=token

  The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

  USCACO01.O2D22A.A1FE8E04B9D4=8
Thread History Distributed Activity

**Time Identifier**

- **Start**: The start date and time of this thread execution.
- **End**: The end date and time of this thread execution.

**Distributed SQL Statistics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Remote Location Name</strong></td>
<td>The name of the remote location with which the local DB2 communicated. The statistics on this panel pertain to the remote location.</td>
</tr>
<tr>
<td><strong>Remote Product ID</strong></td>
<td>The product identifier of the DB2 remote location. The format is: PPPVVRM where PPP is the product identifier, VV is the version number, RR is the release number, and M is the modification level. For example, the identifier for DB2 Version 3 would be DSN03010.</td>
</tr>
<tr>
<td><strong>Protocol Used</strong></td>
<td>The distributed protocol used to communicate with the remote server. DB2 Version 3 and above Possible values are APPLICATION for application directed access or SYSTEM for system directed access. This field is blank if you are monitoring a database access thread.</td>
</tr>
<tr>
<td><strong>Conversations Queued</strong></td>
<td>The number of conversations that were queued by DDF.</td>
</tr>
<tr>
<td><strong>Block Mode Switches</strong></td>
<td>The number of times a switch was made from continuous block mode to limited block mode.</td>
</tr>
<tr>
<td><strong>Message Buffer Rows</strong></td>
<td>The number of rows in the message buffer if block fetch is being used.</td>
</tr>
<tr>
<td><strong>Bind Remote Access</strong></td>
<td>The number of SQL statements bound for remote access.</td>
</tr>
<tr>
<td><strong>Max Allocated Conv</strong></td>
<td>The maximum number of conversations allocated at any given time.</td>
</tr>
<tr>
<td><strong>Conv Allocated</strong></td>
<td>The number of conversations allocated.</td>
</tr>
<tr>
<td><strong>Conv Deallocated</strong></td>
<td>The number of conversations deallocated.</td>
</tr>
<tr>
<td><strong>Indoubt/Remote</strong></td>
<td>The number of threads that became indoubt with the remote location as coordinator.</td>
</tr>
<tr>
<td><strong>Commit/Remote</strong></td>
<td>The number of commit operations performed with the remote location as coordinator.</td>
</tr>
<tr>
<td><strong>Rollback/Remote</strong></td>
<td>The number of rollback operations performed with the remote location as coordinator.</td>
</tr>
<tr>
<td><strong>Remote CPU Time</strong></td>
<td>The amount of CPU time spent processing SQL requests at the remote location. This field applies only to system directed access (private protocols). If application directed access (DRDA) is used, this field is 0. This field appears only for distributed allied threads.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dist Local Elapsed</td>
<td>The amount of time spent waiting for a response to a remote SQL request (includes remote DB2 processing time, VTAM processing time, and network time). This field is displayed only for distributed allied threads.</td>
</tr>
<tr>
<td>Dist Remote Elapsed</td>
<td>The amount of time spent processing SQL requests at the remote location. This field applies only to system directed access (private protocols). If application directed access (DRDA) is used, this field is 0. This field appears for distributed allied threads.</td>
</tr>
<tr>
<td>Tran Sent/Rec</td>
<td>The number of transactions sent to the location and number of transactions received from the location.</td>
</tr>
<tr>
<td>SQL Sent/Rec</td>
<td>The number of SQL calls sent to the location and number of SQL calls received from the location.</td>
</tr>
<tr>
<td>Row Sent/Rec</td>
<td>The number of rows sent to the location and number of rows received from the location.</td>
</tr>
<tr>
<td>Message Sent/Rec</td>
<td>The number of VTAM messages sent to the location and number of VTAM messages received from the location.</td>
</tr>
<tr>
<td>Byte Sent/Rec</td>
<td>The number of bytes sent to the location and number of bytes received from the location.</td>
</tr>
<tr>
<td>Commit Sent/Rec</td>
<td>The number of commits sent to the location and number of commits received from the location.</td>
</tr>
<tr>
<td>Abort Sent/Rec</td>
<td>The number of aborts sent to the location and number of aborts received from the location.</td>
</tr>
<tr>
<td>Conv Sent/Rec</td>
<td>The number of conversations initiated from this location to the remote location and the number of conversations initiated from the remote location to this location.</td>
</tr>
<tr>
<td>Blocks Sent/Rec</td>
<td>The number of blocks sent to the location and number of blocks received from the location if using block mode.</td>
</tr>
<tr>
<td>Prepare Sent/Recv</td>
<td>The number of prepare requests sent to the participant and number of requests received from the coordinator.</td>
</tr>
<tr>
<td>Last Agent Sent/Recv</td>
<td>The number of last agent requests sent to the coordinator and number of requests received from the initiator.</td>
</tr>
<tr>
<td>Commit Sent/Recv</td>
<td>The number of committed requests sent to the participant and number of requests received from the initiator.</td>
</tr>
<tr>
<td>Backout Sent/Recv</td>
<td>The number of backout requests sent to the participant and number of requests received from the coordinator.</td>
</tr>
<tr>
<td>Forget Sent/Recv</td>
<td>The number of forget requests sent to the participant and number of requests received from the coordinator.</td>
</tr>
<tr>
<td>Commit Resp Sent/Recv</td>
<td>The number of commit responses sent to the participant and number of requests received from the coordinator.</td>
</tr>
<tr>
<td>Backout Resp Sent/Recv</td>
<td>The number of backout responses sent to the participant and number of requests received from the coordinator.</td>
</tr>
</tbody>
</table>

The following field values appear only for 2-PHASE COMMIT.
Thread History Package Summary

The Thread History Package Summary screen provides a list of programs (DMRMs or packages) that were executed by a completed thread.

Accounting classes 7 or 8 are required to display package information.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

Thread Identifier

- **Plan**: The DB2 plan name of the thread.
- **Connid**: The DB2 connection identifier of the thread.
- **Corrid**: The DB2 correlation identifier of the thread.
- **Authid**: The DB2 authorization identifier of the thread.
**Attachment Identifier**

The connection type appears in the first field:

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSO</td>
<td>TSO foreground and background</td>
</tr>
<tr>
<td>CALLATCH</td>
<td>DB2 call attach</td>
</tr>
<tr>
<td>DLI</td>
<td>DL/I batch</td>
</tr>
<tr>
<td>CICS</td>
<td>CICS attach</td>
</tr>
<tr>
<td>IMSBMP</td>
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<tr>
<td>IMSMPP</td>
<td>IMS attach MPP</td>
</tr>
<tr>
<td>IMSCTRL</td>
<td>IMS control region</td>
</tr>
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<td>IMS transaction BMP</td>
</tr>
<tr>
<td>RRSAF</td>
<td>Recoverable Resource Manager Services Attachment Facility</td>
</tr>
<tr>
<td>SYSDIR</td>
<td>System directed access (data base access threads)</td>
</tr>
<tr>
<td>APPLDIR</td>
<td>Application directed access (data base access threads)</td>
</tr>
</tbody>
</table>

**DB2**
The DB2 subsystem identifier.

**MVS**
The MVS system identifier.

**Origauth**
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The distributed thread type.</td>
</tr>
<tr>
<td></td>
<td><strong>Distributed Allied</strong> A requesting thread; one that has issued an SQL call to a remote DB2 location.</td>
</tr>
<tr>
<td></td>
<td><strong>Database Access</strong> A server thread; one that has received and is serving an SQL request from a remote DB2 location.</td>
</tr>
</tbody>
</table>

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```
Time Identifier

Start  The start date and time of this thread execution.
End   The end date and time of this thread execution.

Package Summary

Package/DBRM  The name of the program for which data is reported. An asterisk (*) is displayed after the program name of the last executed program.
SQL Requests  The number of SQL statements issued in this package or DBRM.
Total Elapsed Time  The total amount of DB2 time that has elapsed while executing in this package or DBRM.
Total CPU Time  The total amount of DB2 CPU time used while executing in this package or DBRM.
Waits  The total number of times that the thread had to wait for a class 8 event to complete while executing in this package or DBRM.
Total Wait Time  The total amount of time spent waiting for a class 8 event to complete while executing in this package or DBRM.
Thread History Package Detail

Introduction

The Thread History Package Detail screen provides detailed information about activity that occurred for a packaged or DBRM executed by a completed thread.

Accounting classes 7 or 8 are required to display package information.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

- **Plan** The DB2 plan name of the thread.
- **Connid** The DB2 connection identifier of the thread.
- **Corrid** The DB2 correlation identifier of the thread.
- **Authid** The DB2 authorization identifier of the thread.

**Attachment Identifier**

**Connection Type** The connection type appears in the first field:

- **TSO** TSO foreground and background
- **CALLATCH** DB2 call attach
- **DLI** DL/I batch
- **CICS** CICS attach
- **IMSBMP** IMS attach BMP
- **IMSMPP** IMS attach MPP
- **IMSCTRL** IMS control region
- **IMSBMPB** IMS transaction BMP
- **RRSAF** Recoverable Resource Manager Services Attachment Facility
Thread History Package Detail

**SYSDIR**  
System directed access (data base access threads)

**APPLDIR**  
Application directed access (data base access threads)

**DB2**  
The DB2 subsystem identifier.

**MVS**  
The MVS system identifier.

**Origauth**  
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**  
The distributed thread type.

- **Distributed Allied**  
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**  
  A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**  
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**Time Identifier**

**Start**  
The start date and time of this thread execution.

**End**  
The end date and time of this thread execution.

**Package Detail**

**Program**  
The name of the package or DBRM for which data is reported.

**Type**  
The program type - PACKAGE or DBRM.

**Location**  
The name of the location where the package was executed. This field appears only for packages. All times for a remote package represent the time spent locally to execute the remote package.

**Token**  
The consistency token displayed in hexadecimal characters.

**Collection**  
The package collection ID. This field will be displayed only if the program type is a package.

**SQL Request Count**  
The number of SQL statements issued in this package or DBRM.
**Elapsed Time**  
The amount of time that has elapsed while processing this package or DBRM.

**CPU Time**  
The amount of CPU time spent processing this package or DBRM.

**Waits**  
Wait fields provide 2 values:
- The total number of waits.
- The total wait time that has elapsed.

**Synchronous I/O Wait**  
Waits for synchronous I/O reads or writes.

**Asynchronous Read I/O Wait**  
Waits for read I/O performed under another thread (prefetch).

**Asynchronous Write I/O Wait**  
Waits for write I/O performed under another thread (deferred writes).

**Lock/Latch Wait**  
Waits for locks or latches.

**Page Latch Wait**  
Waits for page latch.

**Drain Lock Wait**  
Waits to acquire DRAIN lock.

**Drain of Claims Wait**  
Waits for claimers to be released after acquiring DRAIN lock.

**DB2 Service Task Wait**  
Waits for DB2 services. Types of DB2 services include open/close of dataset, DFHSM recall of a dataset, SYSLGRNG update, define/extend/delete of a dataset, and commit phase 2 for read only threads.

**Archive Log Mode(Quiesce) Wait**  
Waits for MODE(QUIESCE) command to complete.

**Archive Read from Tape Wait**  
Waits for read of archive log from tape.
Thread History Sort and Scan Activity

The Thread History Sort and Scan Activity screen displays sort and scan statistics, such as the number of sorts, the sort elapsed time, and the number of pages scanned by a completed thread.

You must specify SCAN(YES) and/or SORT(YES) when collecting thread data.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

**Plan**
The DB2 plan name of the thread.

**Connid**
The DB2 connection identifier of the thread.

**Corrid**
The DB2 correlation identifier of the thread.

**Authid**
The DB2 authorization identifier of the thread.

**Attachment Identifier**

**Connection Type**
The connection type appears in the first field:

- **TSO**
  TSO foreground and background
- **CALLATCH**
  DB2 call attach
- **DLI**
  DL/I batch
- **CICS**
  CICS attach
- **IMSBMP**
  IMS attach BMP
- **IMSMPP**
  IMS attach MPP
- **IMSCTRL**
  IMS control region
- **IMSBMPB**
  IMS transaction BMP
- **RRSAF**
  Recoverable Resource Manager Services Attachment Facility
- **SYSDIR**
  System directed access (data base access threads)
- **APPLDIR**
  Application directed access (data base access threads)
Thread History Sort and Scan Activity

DB2
The DB2 subsystem identifier.

MVS
The MVS system identifier.

Origauth
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

Distributed Thread Identifier
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

Type
The distributed thread type.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed Allied</td>
<td>A requesting thread; one that has issued an SQL call to a remote DB2 location.</td>
</tr>
<tr>
<td>Database Access</td>
<td>A server thread; one that has received and is serving an SQL request from a remote DB2 location.</td>
</tr>
</tbody>
</table>

Luwid
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

Time Identifier

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>The start date and time of this thread execution.</td>
</tr>
<tr>
<td>End</td>
<td>The end date and time of this thread execution.</td>
</tr>
</tbody>
</table>

Sort Statistics

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Sorts</td>
<td>The total number of sorts performed for this thread.</td>
</tr>
<tr>
<td>Records Sorted</td>
<td>The total number of records sorted for this thread.</td>
</tr>
<tr>
<td>Sort Elapsed Time</td>
<td>The total amount of time spent performing sort processing.</td>
</tr>
<tr>
<td>Sort CPU Time</td>
<td>The total amount of CPU time spent performing sort processing.</td>
</tr>
<tr>
<td>Number of Work Files</td>
<td>The number of logical work files used during sort processing. This is a high-water mark.</td>
</tr>
<tr>
<td>Work File Inserts</td>
<td>The number of records inserted into a work file during sort processing.</td>
</tr>
<tr>
<td>Work File Reads</td>
<td>The number of records retrieved from a work file during sort processing.</td>
</tr>
</tbody>
</table>
### Thread History Sort and Scan Activity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rows Deleted</strong> RI</td>
<td>The number of rows that were deleted or set to null to enforce referential integrity constraints.</td>
</tr>
<tr>
<td><strong>Pages Scanned</strong> RI</td>
<td>The number of pages that were scanned to enforce referential integrity constraints.</td>
</tr>
</tbody>
</table>
| **Type**                | The type of scan information displayed. Possible types:  
|                         | INDEX Index scan  
|                         | DATA Data row scan  
|                         | WORK Work file scan |
| **Count**               | The number of times this thread generated a scan.                                                                                           |
| **Rows Processed**      | The number of rows processed by the data manager.                                                                                           |
| **Rows Updated**        | The number of rows updated by the data manager.                                                                                             |
| **Rows Inserted**       | The number of rows inserted by the data manager.                                                                                             |
| **Rows Deleted**        | The number of rows deleted by the data manager.                                                                                              |
| **Pages Scanned**       | The number of pages scanned by the data manager.                                                                                             |
Thread History Group Buffer Pool Activity

The Thread History Group Buffer Pool Activity screen provides a summary of group buffer pool usage for an individual thread. This panel is available only for DB2 Version 4 and above.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
</tbody>
</table>

**Attachment Identifier**

**Connection Type**

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSO</td>
<td>TSO foreground and background</td>
</tr>
<tr>
<td>CALLATCH</td>
<td>DB2 call attach</td>
</tr>
<tr>
<td>DLI</td>
<td>DL/I batch</td>
</tr>
<tr>
<td>CICS</td>
<td>CICS attach</td>
</tr>
<tr>
<td>IMSBMP</td>
<td>IMS attach BMP</td>
</tr>
<tr>
<td>IMSMPP</td>
<td>IMS attach MPP</td>
</tr>
<tr>
<td>IMSCTRL</td>
<td>IMS control region</td>
</tr>
<tr>
<td>IMSBMPB</td>
<td>IMS transaction BMP</td>
</tr>
<tr>
<td>RRSAF</td>
<td>Recoverable Resource Manager Services Attachment Facility</td>
</tr>
<tr>
<td>SYSDIR</td>
<td>System directed access (data base access threads)</td>
</tr>
<tr>
<td>APPLDIR</td>
<td>Application directed access (data base access threads)</td>
</tr>
</tbody>
</table>
Distributed Thread Identifier

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**DB2**
The DB2 subsystem identifier.

**MVS**
The MVS system identifier.

**Origauth**
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Luwid**
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

- luw-id=token

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

- **USCAC001.O2D22A.A1FE8E04B9D4=8**

Group Buffer Pool Information

**Group Buffer Pool**
The group buffer pool ID.

**Reads - Cross Invalidation:**

**Data Returned**
The number of reads to the group buffer pool required because the page in the member’s buffer pool was invalidated where the data was found and returned to the member.

**Reads - Page Not Found:**

**Data Returned**
The number of reads to the group buffer pool required because the page was not in the member's buffer pool where the data was found and returned to the member.

**Reads - Cross Invalidation:**

**Data not in GBP-R/W Int**
The number of reads to the group buffer pool required because the page in the member’s buffer pool was invalidated, where:

- the data was not found in the group buffer pool and the member had to go to DASD to read the page, and
- other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.
<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reads - Page Not Found: Data not in GBP-R/W Int</strong></td>
<td>The number of reads to the group buffer pool required because the page was not in the member's buffer pool, where:&lt;br&gt; - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt; - other members had read/write interest in the pageset, so DB2 created a directory entry for this page if it did not already exist.</td>
</tr>
<tr>
<td><strong>Reads - Cross Invalidation: Data not in GBP-No R/W Int</strong></td>
<td>The number of reads to the group buffer pool required because the page in the member's buffer pool was invalidated, where:&lt;br&gt; - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt; - no other member had read/write interest in the pageset, so DB2 did not have to register the page, since another member cannot cause a cross-invalidation by updating a page.</td>
</tr>
<tr>
<td><strong>Reads - Page Not Found: Data not in GBP-No R/W Int</strong></td>
<td>The number of reads to the group buffer pool required because the page was not in the member's buffer pool, where:&lt;br&gt; - the data was not found in the group buffer pool and the member had to go to DASD to read the page, and&lt;br&gt; - no other member had read/write interest in the pageset, so DB2 did not have to register the page, since another member cannot cause a cross-invalidation by updating a page.</td>
</tr>
<tr>
<td><strong>Read Hit Percentage</strong></td>
<td>The percentage of all reads to the group buffer pool for which the needed data was found and returned to the member.</td>
</tr>
<tr>
<td><strong>Read-to-Write Percentage</strong></td>
<td>The ratio of reads to writes expressed as a percentage for the group buffer pool.</td>
</tr>
<tr>
<td><strong>Changed Pages Written</strong></td>
<td>The number of changed pages written to the group buffer pool. Pages can be forced out before the application commits if a buffer pool threshold is reached, or when P-lock negotiation forces the pages on the vertical deferred write queue to be written to the group buffer pool.</td>
</tr>
<tr>
<td><strong>Clean Pages Written</strong></td>
<td>The number of clean pages written to the group buffer pool. DB2 writes clean pages for pagesets and partitions defined with GBPCACHE ALL.</td>
</tr>
</tbody>
</table>
Thread History Package Detail

The Thread History Package Detail screen provides detailed information about the activity that has occurred for specific packages/DBRMs that have been executed by a particular thread. It provides information collected for accounting classes 7 and 8. If these DB2 traces are not active, this information is not available.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about
- related topics, choose on of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

Thread Identifier

Plan
The DB2 plan name of the thread.

Connid
The DB2 connection identifier of the thread.

Corrid
The DB2 correlation identifier of the thread.

Authid
The DB2 authorization identifier of the thread.

Attachment Identifier

Batch
The MVS jobname and ASID.

CICS
The CICS jobname, task name, task number, terminal ID, and thread type. The thread type is:
- Pool
  The thread in use is a pool thread.
- Enty
  The thread in use is a nonprotected entry thread.
- Prot
  The thread in use is a protected thread. Protected threads are defined in an RCT entry definition using the THRDS operand.

IMS
The IMS region number, transaction name, region name, and terminal ID (LTERM).

TSO
The TSO user ID and region ASID.

System
The originating DB2 job name and the resource manager that is the source of the thread. An additional line below the Attach line identifies the user thread, if any, being served by the system thread.
**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**

- **Distributed Allied**: A requesting thread; one that has issued an SQL call to a remote DB2 location.
- **Database Access**: A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**

This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the Luwid field displays data such as the following:

```
USCACO01.O2D22A.A1FE8E04B9D4=8
```

**Package Information**

- **Program**: The program name.
- **Type**: The program type, either PACKAGE or DBRM.
- **Location**: The name of the location where the package is executed. For remote packages, times displayed represent the time spent locally to execute the remote package.
- **Token**: The consistency token.
- **Collection**: The package collection id. This field appears only if a package is being used.
- **SQL Request Count**: The number of SQL statements issued.

**In-DB2 Times**

**Note**: In-DB2 Times require an Accounting Class 7 trace. OMEGAMON II displays N/A if this DB2 trace is not active.

For each field described below, OMEGAMON II provides two statistics:

- **Elapsed Time**: The amount of time that has elapsed while processing this package or DBRM.
- **CPU Time**: The amount of CPU time spent processing this package or DBRM.
Thread History Package Detail

**Waits**

*Note:* Wait times require an Accounting Class 8 trace. OMEGAMON II displays N/A if this DB2 trace is not active.

For each field described below, three statistics are provided:

- Total is the total wait time.
- Current is the amount of time that has elapsed waiting for the current event to complete.
- Count is the total number of waits.

**Synchronous I/O Wait**

Waits for synchronous I/O reads or writes.

**Asynchronous Read I/O Wait**

Waits for read I/O performed under another thread (for example, list or sequential prefetch).

**Asynchronous Write I/O Wait**

Waits for write I/O performed under another thread (e.g. deferred writes).

**Local Lock/Latch Wait**

Waits for locks or latches.

**Page Latch Wait**

Waits for page latch.

**Drain Lock Wait**

Waits to acquire drain lock.

**Drain of Claims Wait**

Waits for claims to be released after acquiring drain lock.

**Global Lock Wait**

Waits for global lock in a data sharing environment. This field appears only for DB2 Version 4 and above.

**Inter-System Message Send Wait**

Waits for sending messages to other members in the data sharing group, for example, when database descriptors are changed by CREATE, ALTER, or DROP statements. This field appears only for DB2 Version 4 and above.

**DB2 Service Task Wait**

Waits for DB2 services. Types of DB2 services include open/close of dataset, DFHSM recall of a dataset, SYSLGRNG update, or define/extend/delete of dataset, commit phase 2 for read only threads.

**Archive Log Mode(Quiesce) Wait**

Waits for ARCHIVE LOG MODE(QUIESCE) command to complete.

**Archive Read from Tape Wait**

Waits for read of archive log from tape.

**Stored Procedure Schedule Wait**

Wait for an available TCB for scheduling a stored procedure. This field appears only for DB2 Version 4 and above.
The Thread History Parallel Task screen provides information about the activity of parallel tasks that executed on behalf of a thread. Parallel tasks are created when CPU parallelism is selected as the method for processing an SQL query. Internally, parallel tasks appear as DB2 system threads. This panel is available only for DB2 Version 4 and above.

**Highlighting**

OMEGAMON II does not highlight any fields on this screen.

**Navigation**

For additional information about

- a particular parallel task, move the cursor to the task information line and press the zoom key (PF11). The Thread Detail appears (for that parallel task).
- exceptions that have tripped, type E.A on the top line of the screen.
- related topics, choose one of the options at the top of the screen.
- other topics, use the OMEGAMON II PF keys.

**Fields**

Here are descriptions for some of the fields displayed on this screen.

**Thread Identifier**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>The DB2 plan name of the thread.</td>
</tr>
<tr>
<td>Connid</td>
<td>The DB2 connection identifier of the thread.</td>
</tr>
<tr>
<td>Corrid</td>
<td>The DB2 correlation identifier of the thread.</td>
</tr>
<tr>
<td>Authid</td>
<td>The DB2 authorization identifier of the thread.</td>
</tr>
</tbody>
</table>

**Attachment Identifier**

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSO</td>
<td>TSO foreground and background</td>
</tr>
<tr>
<td>CALLATCH</td>
<td>DB2 call attach</td>
</tr>
<tr>
<td>DLI</td>
<td>DL/I batch</td>
</tr>
<tr>
<td>CICS</td>
<td>CICS attach</td>
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<tr>
<td>IMSBMP</td>
<td>IMS attach BMP</td>
</tr>
<tr>
<td>IMSMPP</td>
<td>IMS attach MPP</td>
</tr>
<tr>
<td>IMSCTRL</td>
<td>IMS control region</td>
</tr>
<tr>
<td>IMSBMPB</td>
<td>IMS transaction BMP</td>
</tr>
</tbody>
</table>
The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**RRSAF**  
Recoverable Resource Manager Services Attachment Facility

**SYSDIR**  
System directed access (data base access threads)

**APPLDIR**  
Application directed access (data base access threads)

**DB2**  
The DB2 subsystem identifier.

**MVS**  
The MVS system identifier.

**Origauth**  
The original (primary) DB2 authorization identifier of the thread. This field displays only when the original identifier is different from the Authid.

**Distributed Thread Identifier**

The following fields appear when the thread on this screen has a distributed relationship with a remote DB2 subsystem.

**Type**  
The distributed thread type.

- **Distributed Allied**  
  A requesting thread; one that has issued an SQL call to a remote DB2 location.

- **Database Access**  
  A server thread; one that has received and is serving an SQL request from a remote DB2 location.

**Luwid**  
This value consists of two parts: the logical unit of work ID (luw-id) and a token. The token can be used in place of the luw-id in any DB2 command that accepts luw-id as input. Format:

```
luw-id=token
```

The luw-id consists of the network name, the originating VTAM LUNAME, and a unique identifier (separated by periods). Thus, the **Luwid** field displays data such as the following:

```
USCAC001.O2D22A.A1FE8E04B9D4=8
```
**Thread History Parallel Task**

<table>
<thead>
<tr>
<th><strong>Parallel Task Information</strong></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Start Time</strong></td>
<td>The time the parallel task was created.</td>
</tr>
<tr>
<td><strong>End Time</strong></td>
<td>The time the parallel task ended.</td>
</tr>
<tr>
<td><strong>CPU Time</strong></td>
<td>The CPU time for the parallel task.</td>
</tr>
<tr>
<td><strong>Getpage</strong></td>
<td>The number of requests for pages. Getpage requests are logical read requests that may not actually result in physical I/O if the page requested is currently in the buffer pool. DB2 resets this count at create thread and signon.</td>
</tr>
<tr>
<td><strong>Read I/O</strong></td>
<td>The number of synchronous read I/O operations.</td>
</tr>
<tr>
<td><strong>Pfetch</strong></td>
<td>The number of sequential, list and dynamic prefetch requests.</td>
</tr>
<tr>
<td><strong>Waits</strong></td>
<td>The number of waits in DB2. Accounting class 3 is required. N/A appears if the data is not available.</td>
</tr>
<tr>
<td><strong>Wait Time</strong></td>
<td>The time spent waiting in DB2. Accounting class 3 is required. N/A appears if the data not available.</td>
</tr>
</tbody>
</table>
Thread History Parallel Task
Introduction

OMEGAMON II for DB2 allows you to start an IFCID trace from the Realtime Main menu. By providing this capability from the menu, the user can initiate an IFCID trace without having to initialize the Generalized Trace Facility.

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Starting an IFCID Trace .......................................................... 592
Displaying an IFCID Trace ...................................................... 594
Stopping an IFCID Trace ........................................................ 595
Starting an IFCID Trace

OMEGAMON II for DB2 allows you to start an IFCID trace from the Realtime Main menu. By providing this capability from the menu, the user can initiate an IFCID trace without having to initialize the Generalized Trace Facility. When you enter option I from the menu, OMEGAMON II for DB2 displays a list of IFCID trace types with an entry field next to each.

### Highlighting
OMEGAMON II does not highlight any fields on this screen.

### Navigation
For additional information about related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

### Fields
Here are descriptions for some of the fields displayed on this screen.

**DSN**  The dataset name of the output dataset where the IFCID trace data will be collected

**Trace Types**  The list of IFCID trace types
- Statistics
- Accounting
- Audit
- Monitor
- Performance
Each trace type is composed of various trace classes. Each trace class contains one or more individual IFCIDs. When selecting trace types, you have specify

| S | Select all classes within the trace type or all IFCIDs within a trace class |
| D | Display all classes within the trace type or all IFCIDs within the trace class |
| R | Reset selection |

- **S**: To select all classes and all IFCIDs associated with a trace type, enter `S` next to the chosen trace types. OMEGAMON II for DB2 requests that you confirm your screen selection by pressing Enter. Upon confirmation, OMEGAMON II for DB2 initiates the IFCID trace for the trace types and all associated classes and IFCIDs.

- **D**: To display the list of classes within a trace type, enter `D` next to the chosen trace type. OMEGAMON II for DB2 displays the list of classes and a brief description of each. To display the list of IFCIDs within a class, enter `D` next to the chosen class. OMEGAMON II for DB2 displays the list of IFCIDs and a brief description of each.
Displaying an IFCID Trace

After selecting the trace type and trace class (or individual IFCIDs) to be traced, you can display the collected trace data. From the IFCID Trace screen, enter B on the command line.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

Here are descriptions for some of the fields displayed on this screen.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFCID</td>
<td>The IFCID number being traced</td>
</tr>
<tr>
<td>Count</td>
<td>The number of times this IFCID was detected during the collection period</td>
</tr>
<tr>
<td>Size</td>
<td>The size of the IFCIDs (in bytes)</td>
</tr>
<tr>
<td>Description</td>
<td>A brief description of the data associated with this IFCID record</td>
</tr>
</tbody>
</table>

The header information for each IFCID Trace record is 64 bytes in length. The following table describes each field in the header information, in the sequence in which they appear.

<table>
<thead>
<tr>
<th>Field</th>
<th>Length (in bytes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record length</td>
<td>2 (hexadecimal)</td>
</tr>
<tr>
<td>QSAM fill characters</td>
<td>2 (hexadecimal)</td>
</tr>
<tr>
<td>Plan name</td>
<td>8 (character)</td>
</tr>
<tr>
<td>Date and time (in the form YYYYMMDDHHMMSSHH)</td>
<td>8 (hexadecimal)</td>
</tr>
<tr>
<td>Secondary authid (or primary authid)</td>
<td>8 (character)</td>
</tr>
<tr>
<td>Original authid</td>
<td>8 (character)</td>
</tr>
<tr>
<td>Connection identifier</td>
<td>8 (character)</td>
</tr>
<tr>
<td>Correlation identifier</td>
<td>12 (character)</td>
</tr>
<tr>
<td>DB2 system identifier</td>
<td>4 (character)</td>
</tr>
<tr>
<td>IFCID number</td>
<td>2 (numeric)</td>
</tr>
<tr>
<td>Number of self-defining sections</td>
<td>2 (numeric)</td>
</tr>
</tbody>
</table>
Stopping an IFCID Trace

From any IFCID trace screen, you can stop an IFCID trace by entering C on the command line. As a result, the Stop IFCID Trace Collection screen appears.

Highlighting

OMEGAMON II does not highlight any fields on this screen.

Navigation

For additional information about

- related topics, choose one of the options at the top of the screen
- other topics, use the OMEGAMON II PF keys

Fields

The Stop IFCID Trace Collection screen does not display any fields.

To stop an IFCID trace that is in progress, remove the greater–than sign (>) to the left of the IFCS command and press Enter.
Stopping an IFCID Trace
Analyzing DB2 CPU Usage

Introduction

This appendix contains information about considerations for analyzing DB2 CPU usage.

Appendix Contents

DB2 CPU Usage ................................................................. 598
CICS Attachments ............................................................ 599
Non-CICS Attachments ...................................................... 600
DB2 CPU Usage

DB2 utilizes MVS cross memory services extensively in processing application requests. As a result, the majority of CPU time consumed in processing thread activity is attributed by MVS SRM to the thread-originating (user’s) address space, not to one of the DB2 system address spaces (SSAS, DBAS, IRLM).

OMEGAMON II provides CPU use information for threads within DB2. In all cases in which CPU use is reported, the CPU rate is expressed in terms of 1–100%, regardless of the number of CPUs online in the processor complex.

The discussion below is designed to help you interpret and make use of the information provided by OMEGAMON II regarding CPU usage.

DB2 exploits MVS CPU timing services introduced in MVS/XA™ SP2.2 and MVS/ESA™. OMEGAMON II also exploits the new CPU timing services as it monitors a DB2 subsystem. To accurately interpret CPU utilization data reported by OMEGAMON II, you must first consider the type of DB2 attachment that is in use. That is, did the threads in question originate from a CICS attachment or from another type of attachment (IMS, TSO, etc.)?
CICS Attachments

For threads originating from the CICS/DB2 attachment, the reported thread CPU usage is entirely attributable to the CICS/DB2 thread. In other words, it is entirely attributable to the CICS/DB2 attachment TCB servicing the thread. The CPU rate includes MVS TCB time only; SRB time is not included. Any CPU use reported for CICS/DB2 threads is a subset of total CICS address space CPU utilization.

Let us say that total CICS address space CPU utilization is 50%, and you have two threads that originate from the CICS connection. If one thread has a reported CPU rate of 5% and the other’s rate is 10%, we can conclude that 15% of CICS address space CPU utilization is attributable to servicing DB2 requests. We can also conclude that 30% (15% / 50% = 30%) of total CICS address space utilization is attributable to servicing DB2 requests.

CPU utilization reported for CICS threads is the same, regardless of the version of the DB2 subsystem being monitored.
Non-CICS Attachments

Analysis of CPU use in non-CICS environments (IMS, TSO, CAF, batch, and utilities) must take several factors into account:

- thread status
- specific attachment environment

OMEGAMON II reports CPU use for the actual MVS TCB (subtask) that owns the active DB2 thread. SRB time is not included.

Thread Status

Unlike the CICS attachment, non-CICS environments typically contain a single DB2 thread. Recognizing the status of that thread will help you determine whether or not the reported CPU use can be attributed to DB2 request activity.

For example, if thread status is In-SQL-Call, the CPU rate reported is indeed related to DB2 thread activity. However, if the thread status is Not-In-DB2, you can conclude that the CPU rate reported is attributable to application activity that is unrelated to DB2, although the application indeed still owns a DB2 thread (for example, an IMS transaction doing DL/I requests).

Attachment Environment

The non-CICS attachment environments vary in the MVS task structure they use to service DB2 threads. Thus, your analysis must take into account the attachment type in use.

For example, an IMS attachment does not result in the creation of an MVS subtask to service a thread. In a TSO environment, however, an additional MVS TCB is created to service each thread.

The following examples illustrate the ways in which thread status, DB2 version, and attachment environment jointly affect your interpretation of the OMEGAMON II CPU use data.

Example 1

In a TSO attachment environment using SPUFI, program DSN is attached as an MVS daughter subtask in the TSO address space. The DSN subtask then attaches program DSNECP10, which is a daughter subtask of the DSN subtask. The DSNECP10 subtask is the actual MVS TCB that owns the DB2 thread. As a result, it is the CPU use of this MVS task that is being reported by OMEGAMON II.

If thread status indicates Not-In-DB2, OMEGAMON II will report that CPU use (MVS TCB CPU use) is 0.
**Example 2**
In an IMS environment, the IMS attachment does not attach a new MVS subtask to service the DB2 thread. As a result, the CPU use reported for IMS threads may reflect CPU time that is attributable to non-DB2 work. This means that you must take into account the status of the DB2 thread, as discussed above.

**Example 3**
Let us say you have an application that creates multiple DB2 threads (executing concurrently) using the DB2 call attach facility (CAF).

The reported CPU use of a thread is always attributable to the MVS task that owns that thread. And you must consider the thread’s status to determine whether the reported CPU use is attributable to DB2 or to non-DB2 application activity.
Introduction

This appendix contains information about the trace requirements for OMEGAMON II.

Appendix Contents

Trace Activation ...................................................... 604
Realtime Data Fields for which Data Is Unavailable ................. 605
Realtime Data Fields for Which Data Is Cumulative ................. 608
Trace Activation

In order to fully exploit OMEGAMON II’s realtime performance monitoring abilities, accounting trace class 1 and class 2 must be active while OMEGAMON II is monitoring your DB2 system. If these traces are not active, specific data elements (listed in Table 2: Realtime Data Fields that Depend on Accounting Traces on page 605) will not be available to OMEGAMON II. Also, some data related to reusable threads becomes cumulative, instead of reflecting a single transaction (see Table 3: Accounting Trace Class 1 Cumulative Data Fields on page 608).

In order to use the historical reporting facilities, you must activate some traces as well. Unlike the realtime portion of OMEGAMON II, historical reporting depends entirely on data supplied by traces. To determine exactly which traces you must activate in order to report on specific data elements, refer to the online data dictionary. For more information on using the collector and extractor to capture trace data, see the OMEGAMON II for DB2 Historical Reporting Guide.
The following table lists the data fields that are available to OMEGAMON II’s realtime component only when certain accounting traces are active. (When the required accounting class is not active, OMEGAMON II displays N/A in the affected fields.) Each row in the table contains the name of an OMEGAMON II screen, the affected fields on that screen, and the accounting trace class that makes data available to each field.

Table 2. Realtime Data Fields that Depend on Accounting Traces

<table>
<thead>
<tr>
<th>Screen Name</th>
<th>Field Names</th>
<th>Accounting Traces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread Detail</td>
<td>Elapsed Time, In-DB2 Time Total, In-DB2 Time Current, In-DB2 CPU Time Total, In-DB2 CPU Time Current, Synchronous I/O Wait Total, Synchronous I/O Wait Current, Asynchronous Read I/O Wait Total, Asynchronous Read I/O Wait Current, Asynchronous Write I/O Wait Total, Asynchronous Write I/O Wait Current, Lock/Latch Wait Total, Lock/Latch Wait Current, Page Latch Wait Total, Page Latch Wait Current, Drain Lock Wait Total, Drain Lock Wait Current, Drain of Claims Wait Total, Drain of Claims Wait Current, DB2 Service Task Wait Total, DB2 Service Task Wait Current, Archive Log Mode (Quiesce) Wait Total, Archive Log Mode (Quiesce) Wait Current, Archive Read from Tape Wait Total, Archive Read From Tape Wait Current</td>
<td>Class 1, Class 2, Class 2, Class 2, Class 2, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3, Class 3</td>
</tr>
</tbody>
</table>
Table 2. Realtime Data Fields that Depend on Accounting Traces

<table>
<thead>
<tr>
<th>Screen Name</th>
<th>Field Names</th>
<th>Accounting Traces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Package Detail</td>
<td>Elapsed Time</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>In-DB2 Time Total</td>
<td>Class 7</td>
</tr>
<tr>
<td></td>
<td>In-DB2 Time Current</td>
<td>Class 7</td>
</tr>
<tr>
<td></td>
<td>In-DB2 CPU Time Total</td>
<td>Class 7</td>
</tr>
<tr>
<td></td>
<td>In-DB2 CPU Time Current</td>
<td>Class 7</td>
</tr>
<tr>
<td></td>
<td>Synchronous I/O Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Synchronous I/O Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Asynchronous Read I/O Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Asynchronous Read I/O Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Asynchronous Write I/O Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Asynchronous Write I/O Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Lock/Latch Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Lock/Latch Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Page Latch Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Page Latch Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Drain Lock Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Drain Lock Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Drain of Claims Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Drain of Claims Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>DB2 Service Task Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>DB2 Service Task Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Archive Log Mode (Quiesce) Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Archive Log Mode (Quiesce) Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Archive Read from Tape Wait Total</td>
<td>Class 8</td>
</tr>
<tr>
<td></td>
<td>Archive Read From Tape Wait Current</td>
<td>Class 8</td>
</tr>
<tr>
<td>Summary of DB2 Activity</td>
<td>Elapsed Time</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Getpage Rate</td>
<td>Class 1</td>
</tr>
<tr>
<td>Exception Messages</td>
<td>COMT</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>ETIM</td>
<td>Class 1</td>
</tr>
<tr>
<td>Current SQL Counts</td>
<td>Aborts</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Commits</td>
<td>Class 1</td>
</tr>
<tr>
<td>All Threads Connected to DB2</td>
<td>Commit</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
<td>Class 1</td>
</tr>
<tr>
<td>Background Thread Summary</td>
<td>Commit</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
<td>Class 1</td>
</tr>
<tr>
<td>CICS Thread Summary</td>
<td>Commit</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
<td>Class 1</td>
</tr>
<tr>
<td>IMS Thread Summary</td>
<td>Commit</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
<td>Class 1</td>
</tr>
<tr>
<td>TSO Thread Summary</td>
<td>Commit</td>
<td>Class 1</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
<td>Class 1</td>
</tr>
</tbody>
</table>
### Table 2. Realtime Data Fields that Depend on Accounting Traces

<table>
<thead>
<tr>
<th>Screen Name</th>
<th>Field Names</th>
<th>Accounting Traces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed Database Access</td>
<td>Elapsed</td>
<td>Class 1</td>
</tr>
<tr>
<td>Thread Summary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Realtime Data Fields for Which Data Is Cumulative

OMEGAMON II reports cumulative values for some fields when accounting trace class 1 is not active. When accounting trace class 1 is not active and the thread involved is reused, the value on OMEGAMON II displays is cumulative since thread creation. The following table contains the names of the fields that may contain cumulative data and the names of the screens on which they appear.

Table 3. Accounting Trace Class 1 Cumulative Data Fields

<table>
<thead>
<tr>
<th>Screen Name</th>
<th>Field Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread Buffer Pool Activity</td>
<td>Getpage Requests</td>
</tr>
<tr>
<td></td>
<td>Getpages/Read I/O</td>
</tr>
<tr>
<td></td>
<td>Page Updates</td>
</tr>
<tr>
<td></td>
<td>List Prefetch Requests</td>
</tr>
<tr>
<td></td>
<td>Prefetch Pages Read</td>
</tr>
<tr>
<td></td>
<td>Hiperpool Reads</td>
</tr>
<tr>
<td></td>
<td>Hiperpool Writes</td>
</tr>
<tr>
<td></td>
<td>Immediate Writes</td>
</tr>
<tr>
<td></td>
<td>Failed Getpage Requests</td>
</tr>
<tr>
<td></td>
<td>Synchronous Read I/O</td>
</tr>
<tr>
<td></td>
<td>Sequential Prefetch Requests</td>
</tr>
<tr>
<td></td>
<td>Dynamic Prefetch Requests</td>
</tr>
<tr>
<td></td>
<td>Prefetch Pages in Hiperpool</td>
</tr>
<tr>
<td></td>
<td>Failed Hiperpool Reads</td>
</tr>
<tr>
<td></td>
<td>Failed Hiperpool Writes</td>
</tr>
<tr>
<td>Summary of DB2 Activity</td>
<td>Elapsed Time</td>
</tr>
<tr>
<td>Exception Messages</td>
<td>ETIM</td>
</tr>
<tr>
<td></td>
<td>GETP</td>
</tr>
<tr>
<td></td>
<td>PREF</td>
</tr>
<tr>
<td></td>
<td>RIO</td>
</tr>
<tr>
<td></td>
<td>PGUP</td>
</tr>
</tbody>
</table>
Realtime Data Fields for Which Data Is Cumulative

When accounting trace class 1 is active, the values in these fields will still be cumulative if all of the following conditions are met:

- The thread involved was created as a reusable thread.
- The thread is actually being reused.
- Thread signon was not driven for the new user of the thread.

### Table 3. Accounting Trace Class 1 Cumulative Data Fields

<table>
<thead>
<tr>
<th>Screen Name</th>
<th>Field Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current SQL Counts</td>
<td>Aborts</td>
</tr>
<tr>
<td></td>
<td>Alters</td>
</tr>
<tr>
<td></td>
<td>Connects Type 1</td>
</tr>
<tr>
<td></td>
<td>Connects Type 2</td>
</tr>
<tr>
<td></td>
<td>Commits</td>
</tr>
<tr>
<td></td>
<td>Creates/Drops</td>
</tr>
<tr>
<td></td>
<td>Deletes</td>
</tr>
<tr>
<td></td>
<td>Describes</td>
</tr>
<tr>
<td></td>
<td>Fetches</td>
</tr>
<tr>
<td></td>
<td>Grants/Revokes</td>
</tr>
<tr>
<td></td>
<td>Incremental Binds</td>
</tr>
<tr>
<td></td>
<td>Inserts</td>
</tr>
<tr>
<td></td>
<td>Label/Comment Ons</td>
</tr>
<tr>
<td></td>
<td>Lock Tables</td>
</tr>
<tr>
<td></td>
<td>Open/Close Cursors</td>
</tr>
<tr>
<td></td>
<td>Prepares</td>
</tr>
<tr>
<td></td>
<td>Releases</td>
</tr>
<tr>
<td></td>
<td>Selects</td>
</tr>
<tr>
<td></td>
<td>Set Connections</td>
</tr>
<tr>
<td></td>
<td>Set Degrees</td>
</tr>
<tr>
<td></td>
<td>Set Host Variables</td>
</tr>
<tr>
<td></td>
<td>Set SQLIDs</td>
</tr>
<tr>
<td></td>
<td>Updates</td>
</tr>
<tr>
<td>All Threads Connected to DB2</td>
<td>Commit</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
</tr>
<tr>
<td></td>
<td>Getpg</td>
</tr>
<tr>
<td></td>
<td>Update</td>
</tr>
<tr>
<td>CICS Thread Summary</td>
<td>Commit</td>
</tr>
<tr>
<td></td>
<td>Elapsed</td>
</tr>
<tr>
<td></td>
<td>Getpg</td>
</tr>
<tr>
<td></td>
<td>Update</td>
</tr>
</tbody>
</table>

When accounting trace class 1 is active, the values in these fields will still be cumulative if all of the following conditions are met:

- The thread involved was created as a reusable thread.
- The thread is actually being reused.
- Thread signon was not driven for the new user of the thread.
Lock Types and Lock Levels

Introduction

This appendix contains additional information about the lock types and lock levels on which OMEGAMON II reports.

If a database is deleted or a data inconsistency problem exists, OMEGAMON II cannot translate the database name; it displays the resource ID instead. If the pageset is deleted or a data inconsistency problem exists, OMEGAMON II cannot translate the pageset name; it will not be displayed.

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- Lock Types ................................................................. 612
- Page Lock Levels ....................................................... 615
- Tablespace Lock Levels .............................................. 616
- Internal Lock Types .................................................... 617
Lock Types

The following table describes the lock types that OMEGAMON II displays:

Table 4. Lock Types

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBP</td>
<td>Alter buffer pool lock</td>
<td>A lock on a buffer pool during execution of an ALTER BUFFERPOOL command.</td>
</tr>
<tr>
<td>BIND</td>
<td>Bind lock</td>
<td>An autobind/remote bind lock.</td>
</tr>
<tr>
<td>CCAT</td>
<td>CATMAINT convert catalog lock</td>
<td>This lock is acquired when catalog conversion is performed.</td>
</tr>
<tr>
<td>CDIR</td>
<td>CATMAINT convert directory lock</td>
<td>This lock is acquired when directory conversion is performed.</td>
</tr>
<tr>
<td>CDRN</td>
<td>Cursor Stability drain lock</td>
<td>This lock is acquired to drain all CS read access to an object.</td>
</tr>
<tr>
<td>CMIG</td>
<td>CATMAINT migration lock</td>
<td>This lock is acquired when catalog migration is performed.</td>
</tr>
<tr>
<td>COLL</td>
<td>Collection lock</td>
<td>A collection lock.</td>
</tr>
<tr>
<td>DBEX</td>
<td>Database exception LPL/GRECP lock</td>
<td>A lock on a either a “Logical page list” or “Group buffer pool recovery pending” database exception status. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>DBXU</td>
<td>DB exception update lock</td>
<td>A lock used for updating database exception status.</td>
</tr>
<tr>
<td>DPAG</td>
<td>Data page lock</td>
<td>A page lock in a tablespace. When programs read data or update data, they acquire a page lock containing the data.</td>
</tr>
<tr>
<td>DSET</td>
<td>Partitioned lock</td>
<td>A partitioned tablespace contains one or more partitions (up to 64). A partitioned table space is created when you create a tablespace using the SQL statement CREATE TABLESPACE with the NUMPARTS parameter. Only one table can be stored on a partitioned tablespace. Each partition contains one part of a table. The partitioned lock only locks the partition with the data being referenced.</td>
</tr>
<tr>
<td>DTBS</td>
<td>Database lock</td>
<td>A lock on the database.</td>
</tr>
<tr>
<td>GRBP</td>
<td>Group BP start/stop lock</td>
<td>A group buffer pool start/stop lock.</td>
</tr>
<tr>
<td>HASH</td>
<td>Hash anchor lock</td>
<td>A hash anchor lock.</td>
</tr>
<tr>
<td>IEOF</td>
<td>Index EOF</td>
<td>A lock acquired at index end of file.</td>
</tr>
</tbody>
</table>
## Lock Types

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPAG</td>
<td>Index page lock</td>
<td>A page lock in an index space. When application programs read or update data, they acquire a lock on the page containing the index when indexing is used.</td>
</tr>
<tr>
<td>MDEL</td>
<td>Mass delete lock</td>
<td>This lock is acquired when doing a mass delete from a table (for example, when you DELETE FROM a table) within a segmented tablespace. It is used to prevent another user from reusing freed segments before a delete operation is committed.</td>
</tr>
<tr>
<td>PALK</td>
<td>Partition lock</td>
<td>DB2 Version 6.1 and above only.</td>
</tr>
<tr>
<td>PBPC</td>
<td>Group BP level castout P-lock</td>
<td>A physical lock acquired when a castout of a group buffer pool occurs. Castout is the process of writing pages in the group buffer pool out to DASD. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PCDB</td>
<td>DDF CDB P-lock</td>
<td>A Distributed Data Facility communication database physical lock. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PDBD</td>
<td>PDBD P-lock</td>
<td>A database descriptor physical lock. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PDSO</td>
<td>Pageset or partitioned pageset open lock</td>
<td>If the dataset supporting the tablespace that is referenced by the application is not opened, the program will acquire a lock to open the dataset. The dataset will stay open if CLOSE=NO is defined in the SQL statement creating the tablespace.</td>
</tr>
<tr>
<td>PITR</td>
<td>Index manager tree P-lock</td>
<td>An index manager tree physical lock. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PPAG</td>
<td>Page P-lock</td>
<td>A physical lock on a page. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PPSC</td>
<td>Pageset/partition level castout P-lock</td>
<td>A pageset/partition level castout physical lock. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PPSP</td>
<td>Pageset/partition P-lock</td>
<td>A pageset/partition level castout physical lock. This lock is used only in a data sharing environment.</td>
</tr>
<tr>
<td>PRLF</td>
<td>RLF P-lock</td>
<td>A Resource Limit Facility physical lock. This lock is used only in a data sharing environment.</td>
</tr>
</tbody>
</table>
### Table 4. Lock Types

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSET</td>
<td>Pageset lock</td>
<td>A pageset can be a tablespace or indexspace. A pageset containing DB2 tables is a tablespace. A pageset containing DB2 index structure is an indexspace. A pageset can be simple or partitioned. This lock type is for the simple pageset only.</td>
</tr>
<tr>
<td>PSPI</td>
<td>Pageset piece lock</td>
<td>A pageset is a collection of pageset pieces. Each pageset piece is a separate VSAM dataset. A simple pageset contains from 1 to 32 pieces. Each piece of a simple pageset is limited to 2 gigabytes. Whenever a simple pageset piece reaches this size, another piece is allocated and the pageset grows. This is a lock on the expanded pageset piece.</td>
</tr>
<tr>
<td>RDRN</td>
<td>Repeatable Read drain lock</td>
<td>This lock is acquired to drain all RR access to an object.</td>
</tr>
<tr>
<td>RSTR</td>
<td>SCA restart lock</td>
<td>A lock on SCA access for restart/redo information.</td>
</tr>
<tr>
<td>ROW</td>
<td>Row lock</td>
<td>A lock on a row.</td>
</tr>
<tr>
<td>SDBA</td>
<td>Start/stop lock on DBA table</td>
<td>A lock on the table, tablespace, or database when a CREATE/DROP is being processed against these objects.</td>
</tr>
<tr>
<td>SKCT</td>
<td>Skeleton cursor table lock</td>
<td>A lock on the application plan.</td>
</tr>
<tr>
<td>SKPT</td>
<td>Skeleton package table lock</td>
<td>A lock on the application package.</td>
</tr>
<tr>
<td>SREC</td>
<td>Log range lock</td>
<td>DB2 writes a record in the log range tablespace (SYSLGRNG) every time a tablespace is opened and updated, and updates SYSLGRNG whenever that tablespace is closed. The record contains the opening and/or closing log RBA (relative byte address) for the tablespace. When DB2 writes to SYSLGRNG, the program acquires a lock on the tablespace with updates.</td>
</tr>
<tr>
<td>TABL</td>
<td>Table lock</td>
<td>A lock on the table which resides in a segmented tablespace.</td>
</tr>
<tr>
<td>UNDT</td>
<td>Undetermined lock</td>
<td>A lock that is not any of the other listed lock types.</td>
</tr>
<tr>
<td>UTEX</td>
<td>Utility exclusive execution lock</td>
<td>A utility exclusive execution lock.</td>
</tr>
<tr>
<td>UTID</td>
<td>Utility UID lock</td>
<td>A utility identifier lock.</td>
</tr>
<tr>
<td>UTSE</td>
<td>Utility serialization lock</td>
<td>This lock is required when running utility jobs.</td>
</tr>
<tr>
<td>WDRN</td>
<td>Write drain lock</td>
<td>This lock is acquired to drain all write access to an object.</td>
</tr>
</tbody>
</table>
Page Lock Levels

The following table describes the page lock levels that OMEGAMON II displays:

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Shared</td>
<td>The lock owner and any concurrent programs may read, but not change the locked data.</td>
</tr>
<tr>
<td>U</td>
<td>Update</td>
<td>The lock owner can read the data, and intends to change it. Concurrent programs can acquire S locks and read the data; no other program can acquire a U lock.</td>
</tr>
<tr>
<td>X</td>
<td>Exclusive</td>
<td>The lock owner can read or change the locked data. No other program can acquire any lock on the data, or access the locked data at all.</td>
</tr>
</tbody>
</table>
Tablespace Lock Levels

The following table describes the tablespace lock levels that OMEGAMON II displays:

<table>
<thead>
<tr>
<th>Lock Type</th>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS</td>
<td>Intent Share</td>
<td>The lock owner may read data in the tablespace, but not change it. Other programs may both read and change the data.</td>
</tr>
<tr>
<td>IX</td>
<td>Intent Exclusive</td>
<td>The lock owner and concurrent programs may read and change data in the tablespace.</td>
</tr>
<tr>
<td>S</td>
<td>Shared</td>
<td>The lock owner and any concurrent programs may read, but not change data in the tablespace.</td>
</tr>
<tr>
<td>SIX</td>
<td>Share with Intent Exclusive</td>
<td>The lock owner may read and change data in the tablespace. Concurrent programs may read data in the tablespace, but not change it.</td>
</tr>
<tr>
<td>X</td>
<td>Exclusive</td>
<td>The lock owner may read or change data in the tablespace. No other program may access the tablespace at all.</td>
</tr>
</tbody>
</table>
Internal Lock Types

OMEGAMON II also displays the following lock types that are used internally by DB2:

- **NSU**: Non-shared update.
- **UNS**: Unprotected share.
Internal Lock Types
Introduction

This appendix contains a list of all possible values for the status of a DB2 thread. This field appears on thread summary and thread detail screens as Status, DB2 Status, or Thread Status.

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DB2 Thread Status Values .................................................. 620
DB2 Thread Status Values

Following is a list of all possible values for the status of a DB2 thread.

**IN-ABORT**  The thread is in abort processing.
**IN-BIND-DYNM**  The thread is in dynamic bind processing.
**IN-BIND-STAT**  The thread is in static bind processing.
**IN-COMMAND**  Command threads display this status when they are active in DB2 and executing within the DB2 command processor. (This type of thread always has a blank plan name.)

**IN-COMMIT**  The thread is in commit processing (applies only to threads that originate from an attachment that does not use two-phase commit protocol).
**IN-COMT-PHS1**  The thread is in commit phase 1 processing.
**IN-COMT-PHS2**  The thread is in commit phase 2 processing.
**IN-CRTE-THRD**  The thread is in create thread processing.
**IN-DB2**  The thread is executing in DB2. A more descriptive status could not be determined.
**INDOUBT**  The thread is in doubt.
**IN-SIGNON**  The thread is in signon processing. This status applies only to threads originating from CICS or IMS attachments.
**IN-STOR-PROC**  The thread is currently running in a stored procedure.
**IN-SQL-CALL**  The thread is processing an SQL call.
**IN-SQL-SORT**  The thread is executing an SQL call and is doing the sort processing required to satisfy the call’s request.
**IN-TERM-THRD**  The thread is in termination as a result of allied task termination. This status corresponds to DB2 DISPLAY THREAD=D status.
**IN-USER-FUNC**  The thread is currently running a user-defined function.
**NOT-IN-DB2**  The thread is not currently executing in DB2.
**SWAPPED-OUT**  The thread is not currently executing in DB2. The thread originating address space is swapped out.

**WAIT-ARCHIVE**  The thread is waiting for an archive log tape mount necessary during thread abort processing.
**WAIT-ARCREAD**  The thread is currently waiting for read of archive log from tape.
**WAIT-ASYNCRD**  The thread is currently waiting for completion of a read I/O that is being done under a thread other than this one (for example, sequential or list prefetch).
**WAIT-ASYNCWR**  The thread is currently waiting for completion of write I/O that is being done under a thread other than this one (for example, deferred writes).
**WAIT-CLAIMER**  The thread is currently waiting for claimers to be released after acquiring drain lock.
WAIT-CONVLIM  The distributed thread is in a synchronous wait because the conversation limit has been reached for its designated logmode.

WAIT-CTHREAD  The thread is queued in create thread processing because DB2 reached the CTHREAD value. THREAD=QD status.

WAIT-DRNLOCK  The thread is currently waiting to acquire drain lock.

WAIT-GLBLOCK  The thread is currently waiting for either
- inter-system communication within the data sharing group to determine if there is lock contention.
- a lock held by another subsystem in the data sharing group.
  This status appears only for DB2 Version 4 and above.

WAIT-LOCK    The thread is waiting for a lock.

WAIT-LOGQSCE  The thread is currently suspended due to an ARCHIVE LOG MODE(QUIESCE) command.

WAIT-MGSND    The thread is waiting because of inter-system message sending contention. This status appears only for DB2 Version 4 and above.

WAIT-PGLATCH  The thread is currently waiting for page latch.

WAIT-REMREQ   The database access thread is in a synchronous wait (waiting for a response or a request from the originating DB2 subsystem).

WAIT-REUSE    The thread is not currently in use and is waiting to be reused. This status applies only to CICS and IMS threads.

WAIT-SERVICE  The thread is currently waiting for completion of a DB2 service. Types of DB2 services include: open/close of a dataset, DFHSM recall of a dataset, SYSLGRNG update or define/extend/delete of a dataset, rollback, and commit phase 2 for read only threads.

WAIT-SPSCHD   The thread is waiting for a TCB to become available in the stored procedures address space to schedule a stored procedure.

WAIT-SYNC-IO  The thread is currently waiting for completion of a synchronous read or write I/O.

Note: This status may indicate that a DB2 resource is not large enough. You can use the OMEGAMON II resource manager or object analysis displays to further isolate the problem.

WAIT-TERM-TH  The thread is queued and waiting for thread termination as a result of allied task termination. This status corresponds to DB2 DISPLAY THREAD=QD status.

UTIL-STOP     The DB2 utility was started but not completed due to abnormal termination.
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