

5.4

*IBM OMEGAMON for Db2 Performance
Expert on z/OS
Enhanced 3270 User Interface User's
Guide*



2024-03-28 edition

This edition applies to Version 5 Release 4 of IBM® OMEGAMON for DB2® Performance Expert on z/OS (product number 5655-W37) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this information

IBM OMEGAMON for Db2 Performance Expert on z/OS (also referred to as OMEGAMON for Db2 Performance Expert) is a performance analysis, monitoring, and tuning tool for Db2 on z/OS® environments.

The document is part of the OMEGAMON for Db2 Performance Expert documentation library which provides instructions for installing, configuring, and using OMEGAMON for Db2 Performance Expert and is designed to help database administrators, system programmers, application programmers, and system operators perform these tasks:

- Plan for the installation of OMEGAMON for Db2 Performance Expert
- Install and operate OMEGAMON for Db2 Performance Expert
- Customize your OMEGAMON for Db2 Performance Expert environment
- Diagnose and recover from OMEGAMON for Db2 Performance Expert problems
- Design and write applications for OMEGAMON for Db2 Performance Expert
- Use OMEGAMON for Db2 Performance Expert with other DB2 products

Chapter 1. Overview

IBM OMEGAMON for Db2 Performance Expert on z/OS (OMEGAMON for Db2 Performance Expert) enables you to monitor, analyze, and tune the performance of your Db2 subsystems and Db2 applications.

Service updates and support information

Service updates and support information for this product, including software fix packs, PTFs, frequently asked questions (FAQs), technical notes, troubleshooting information, and downloads, are available from the web.

To find service updates and support information, see the following website:

<https://www.ibm.com/support/pages/omegamon-xe-db2-pepm-web-based-delivery-and-updates-windows-and-unix-based-components>

How to read syntax diagrams

The rules in this section apply to the syntax diagrams that are used in this publication.

Arrow symbols

Read the syntax diagrams from left to right, from top to bottom, following the path of the line.



Two right arrows followed by a line indicate the beginning of a statement.



One right arrow at the end of a line indicates that the statement syntax is continued on the next line.



One right arrow followed by a line indicates that a statement is continued from the previous line.



A line followed by a right arrow and a left arrow indicates the end of a statement.

Conventions

- SQL commands appear in uppercase.
- Variables appear in italics (for example, *column-name*). They represent user-defined parameters or suboptions.
- When entering commands, separate parameters and keywords by at least one blank if there is no intervening punctuation.
- Enter punctuation marks (slashes, commas, periods, parentheses, quotation marks, equal signs) and numbers exactly as given.
- Footnotes are shown by a number in parentheses, for example, (1).

Required items

Required items appear on the horizontal line (the main path).



Optional items

Optional items appear below the main path.

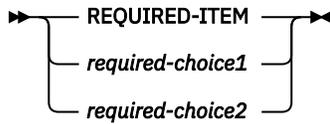


If an optional item appears above the main path, that item has no effect on the execution of the statement and is used only for readability.

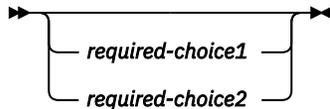


Multiple required or optional items

If you can choose from two or more items, they appear vertically in a stack. If you *must* choose one of the items, one item of the stack appears on the stack main path.

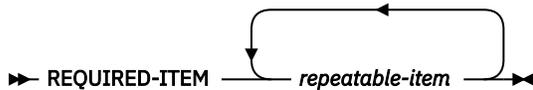


If choosing one of the items is optional, the entire stack appears below the main path.

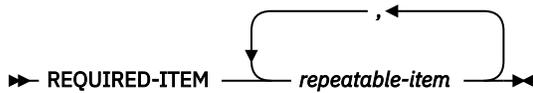


Repeatable items

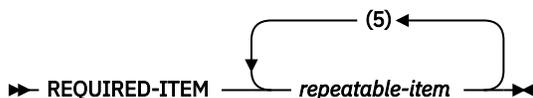
An arrow returning to the left above the main line indicates that an item can be repeated.



If the repeat arrow contains a comma, you must separate repeated items with a comma.



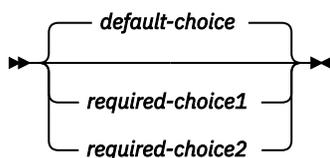
If the repeat arrow contains a number in parenthesis, the number represents the maximum number of times that the item can be repeated.



A repeat arrow above a stack indicates that you can specify more than one of the choices in the stack.

Default keywords

IBM-supplied default keywords appear above the main path, and the remaining choices are shown below the main path. In the parameter list following the syntax diagram, the default choices are underlined.



Conventions

These conventions are used throughout the documentation.

Symbols

The following symbols might appear in command syntax:

Symbol	Usage
	<p>The or symbol is used to denote a choice. You can use the argument on the left or the argument on the right. For example:</p> <pre>YES NO</pre> <p>In this example, you can specify YES or NO.</p>
()	<p>Denotes optional arguments. Arguments that are not enclosed in square brackets are required. For example:</p> <pre>APPLDEST DEST (ALTDEST)</pre> <p>In this example, DEST is a required argument and ALTDEST is optional.</p>
{ }	<p>Some documents use braces to denote mandatory arguments, or to group arguments for clarity. For example:</p> <pre>COMPARE {workload} - REPORT={SUMMARY HISTOGRAM}</pre> <p>In this example, the workload variable is mandatory. The REPORT keyword must be specified with a value of SUMMARY or HISTOGRAM.</p>
-	<p>Default values are underscored. For example:</p> <pre>COPY infile outfile - [COMPRESS={<u>YES</u> NO}]</pre> <p>In this example, the COMPRESS keyword is optional. If specified, the only valid values are YES or NO. If omitted, the default is YES.</p>

Notation conventions

The following conventions are used when referring to high-level qualifiers:

hilev

A high-level qualifier. The high-level qualifier is the first prefix or set of prefixes in the data set name. Site-specific high-level qualifiers are shown in italics.

For example:

- *thilev* refers to the high-level qualifier for your target data set.
- *rhilev* refers to the high-level qualifier for your runtime data set.

For members in target libraries, the high-level qualifier is *thilev* rather than *rhilev*.

- *shilev* refers to the SMP/E library high-level qualifier.

Terminology

The following table shows the products that are described in this publication and the short names with which they are referred to throughout this publication.

<i>Table 1. Product names and their short names</i>	
Product name	Short name
IBM OMEGAMON for Db2 Performance Expert on z/OS	OMEGAMON for Db2 Performance Expert

Accessibility features

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use a software product successfully.

The major accessibility features in this product enable users to perform the following activities:

- Use assistive technologies such as screen readers and screen magnifier software. Consult the assistive technology documentation for specific information when using it to access z/OS interfaces.
- Customize display attributes such as color, contrast, and font size.
- Operate specific or equivalent features by using only the keyboard. Refer to the following publications for information about accessing ISPF interfaces:
 - *z/OS ISPF User's Guide, Volume 1*
 - *z/OS TSO/E Primer*
 - *z/OS TSO/E User's Guide*

These guides describe how to use the ISPF interface, including the use of keyboard shortcuts or function keys (PF keys), include the default settings for the PF keys, and explain how to modify their functions.

Chapter 2. About the Enhanced 3270 User Interface

The Enhanced 3270 User Interface is the latest generation of user interfaces for the OMEGAMON® monitoring products.

The Enhanced 3270 User Interface offers integration capability with certain performance monitoring products. If you have IBM Db2 Query Monitor for z/OS and/or IBM OMEGAMON for CICS® on z/OS you can see metrics originating from these products embedded in IBM OMEGAMON for Db2 Performance Expert on z/OS screens. These products must be installed, configured, and running in the same OMEGAMON Monitoring environment.

Navigating to KDPSTART

When you log on to the E3270 UI, the workspace Enterprise Summary (KOBSTART) is displayed. It shows data from the products that are installed on your system.

From this workspace you can drill down to any other screen.

However, depending on the following criteria, a different workspace might be displayed after the first logon to OMEGAMON for Db2 Performance Expert if:

- More than one product that supports the E3270 UI is installed on your system
- A particular workspace is designated as the first workspace in the site profile or the user profile

Chapter 3. Viewing active Db2 data sharing groups

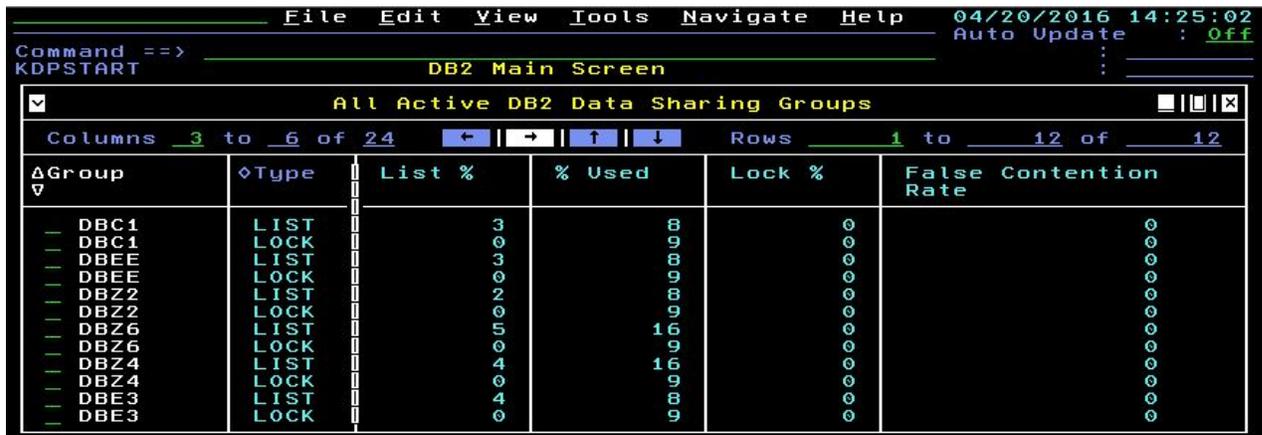
The summary panel displays the DB2 data sharing groups that are active in your enterprise system.

About this task

It displays the general state and health of the active DB2 data sharing groups. This is the starting point for troubleshooting.

Procedure

From **Enterprise Summary**, select the option **P** next to any DB2 subsystem to navigate to DB2 Main Screen. DB2 Main Screen consists of **All Active DB2 Data Sharing Groups**, followed by **All Active DB2 Subsystems**.



The screenshot shows the DB2 Main Screen interface. At the top, there is a menu bar with 'File', 'Edit', 'View', 'Tools', 'Navigate', and 'Help'. The date and time are '04/20/2016 14:25:02' and 'Auto Update : Off'. Below the menu bar, the command 'KDPSTART' is entered, and the screen title is 'DB2 Main Screen'. The main content area is titled 'All Active DB2 Data Sharing Groups' and displays a table with the following data:

ΔGroup	◇Type	List %	% Used	Lock %	False Contention Rate
— DBC1	LIST	3	8	0	0
— DBC1	LOCK	0	9	0	0
— DBEE	LIST	3	8	0	0
— DBEE	LOCK	0	9	0	0
— DBZ2	LIST	2	8	0	0
— DBZ2	LOCK	0	9	0	0
— DBZ6	LIST	5	16	0	0
— DBZ6	LOCK	0	9	0	0
— DBZ4	LIST	4	16	0	0
— DBZ4	LOCK	0	9	0	0
— DBE3	LIST	4	8	0	0
— DBE3	LOCK	0	9	0	0

Figure 1. All Active DB2 Subsystems

The following options are available:

- a. D Group Object Analysis Database Activity (KDPGOATS)
- b. E Events (KDPEFIL1)
- c. F System SQL Counts (KDPPSQL1)
- d. G DSNZPARAMs (KDPPZSYS)
- e. L Global Lock Conflicts (KDPGLKGN)
- f. O Group Object Analysis (KDPGOA)
- g. P Group Object Analysis Thread Database (KDPGOATD)
- h. Q Group Object Analysis Volume (KDPGVOL)
- i. S Global & Group Buffer Pools (KDPPGPLL)
- j. T DSG Active Threads (KDPPTHRD)
- k. V Group Object Analysis Volume Thread (KDPGVOLT)
- l. W View EXPLAIN Reports (KDPPEXPL)
- m. X Coupling Facility Details (KDPXCFD)
- n. H HISTORY (KDPSTR2H)

Viewing thread activity

A view of thread activity for Db2 data sharing groups.

Viewing active threads

KDPPTHRD provides a global view of thread activity for an entire data sharing group.

With this information, you can identify all active application threads and track thread activity over a period of time. You can use the thread data to monitor critical application threads and to evaluate the thread elapsed times and the wait times for critical threads. You can also observe thread activity for threads within the same system, group, and member.

Navigating to KDPPTHRD

All Active Db2 Data Sharing Groups → T DSG Group Active Threads

Select the corresponding tab to navigate to:

Coupling (KDPXCFD)

Connection status information for all connections to a coupling facility structure.

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group.

SQLC (KDPPSQL1)

Displays the system SQL counts for a thread for each member of a data sharing group.

DSNZPARMs (KDPPZSYS)

Displays information about DSNZPARM parameters that are related to thread management.

Lock conf (KDPGLKGN)

The lock conflicts that exist in a data sharing group.

Buf Pool (KDPPGPLL)

A summary of all group buffer pools for all members of a data sharing group.

Zoom-in from KDPPTHRD

C Cancel Thread (KDPTCANC)

Provides an option to cancel a thread.

O Thread Locks Owned (KDPTHRL)

Detailed information about the locks and the claims that are owned by an individual thread.

S Thread Detail Accounting (KDPTHDA2)

The accounting classes 1 and 2 for a selected thread.

T Thread Detail SQL Text (KDPPSQLT)

The SQL statement that a Db2 thread is currently executing.

W Thread Detail Class 3 (KDPTHDR3)

The accounting class 3 wait times for a selected thread.

Q Thread Statistics (KDPPTHDS)

Thread statistics for a specific application thread. If the application thread is a parallel thread, the table view displays thread statistics for all the associated parallel threads.

X Multi-Thread Cancel No Confirmation (KDPPTKAC)

Cancel multiple threads without being prompted individually to confirm each thread cancellation.

Viewing volume threads

KDPGVOLT displays an overview of the performance of volumes that contain DB2 objects. With this information, you can evaluate DASD performance by volume.

Navigating to KDPGVOLT

All Active DB2 Data Sharing Groups → V Group Object Analysis Volume Thread

Select the corresponding tab to navigate to:

GOA DB (KDPGOATS)

A high-level analysis of getpage and I/O activity from a DB2 database perspective.

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group.

GOA TDB (KDPGOATD)

Object Analysis database use by thread for a data sharing group.

GOA VOL (KDPGVOL)

An overview of the performance of the volumes that contain DB2 objects.

GOA VTH (KDPGVOLT)

The volume activity by thread workspace.

Zoom-in from KDPGVOLT

S Group Object Analysis Volume Detail (KDPGVOL2)

The thread activity by volume workspace.

Viewing object analysis database threads

KDPGOATD displays the usage of the Object Analysis database by thread for a data sharing group.

Navigating to KDPGOATD

All Active Db2 Data Sharing Groups → P Group Object Analysis Thread Database

Select the corresponding tab to navigate to:

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group.

GOA DB (KDPGOATS)

A high-level analysis of getpage and I/O activity from a Db2 database perspective.

GOA TDB (KDPGOATD)

Object Analysis database use by thread for a data sharing group.

GOA VOL (KDPGVOL)

An overview of the performance of the volumes that contain Db2 objects.

GOA VTH (KDPGVOLT)

The volume activity by thread workspace.

Zoom-in from KDPGOATD

S Group Object Analysis Spacename (KDPSPAC)

Provides information about the activity of Db2 databases and Db2 tablespaces. With this information, you can do a more detailed analysis of the activities for a Db2 databases and Db2 tablespaces.

Viewing lock conflicts

KDPGLKGN displays the lock conflicts that exist in a data sharing group.

Navigating to KDPGLKGN

All Active DB2 Data Sharing Groups → L Group Lock Conflicts

Select the corresponding tab to navigate to:

Threads (KDPPTHRD)

Provides a global view of thread activity for an entire data sharing group.

Coupling (KDPXCFD)

Connection status information for all connections to a coupling facility structure.

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group.

SQLC (KDPPSQL1)

Displays the system SQL counts for a thread for each member of a data sharing group.

DSNZPARMS (KDPPZSYS)

Displays information about DSNZPARAM parameters that are related to thread management.

Lock Conf (KDPGLKGN)

The lock conflicts that exist in a data sharing group.

Buf Pool (KDPPGPLL)

A summary of all group buffer pools for all members of a data sharing group.

Zoom-in from KDPGLKGN

Thread Locks Owned (KDPPLK)

The locks and claims that are owned by a thread that is linked from the data sharing group Lock Conflicts workspace.

Viewing DSNZPARMs parameters

KDPPZSYS displays information about DSNZPARAM parameters that are related to thread management. These parameters are defined on the DB2 panels DSNTIPE and DSNTIPE1.

Navigation to KDPPZSYS

All Active DB2 Subsystems → G DSNZPARMs

Select the corresponding tab to navigate to:

TRC (Trace Parameters KDPPZTRC)

Parameters that are related to the trace. These parameters are defined on the DB2 panel, DSNTIPN.

LOG (Logging Parameters KDPPZLOG)

Parameters that are related to the active log. These parameters are defined on the DB2 panel, DSNTIPL.

ARCH (Archiving Parameters KDPPZARC)

Parameters that are related to log archiving. These parameters are defined on the DB2 panels DSNTIPA and DSNTIPH.

CNTL (Authorizaation/RCF/DDF parameters KDPPZCTL)

Parameters that are related to operator functions. These parameters are defined on the DB2 panels DSNTIPO, DSNTIPP, DSNTIPP1, DSNTIPR and DSNTIP5.

IRLM (IRLM Parameters KDPZIRLM)

Parameters that are related to IRLM. These parameters are defined on the DB2 panels DSNTIPI and DSNTIPJ.

STG (Storage Parameters KDPPZSTG)

DSNZPARM parameters that are related to storage and sizes. These parameters are defined on the DB2 panels DSNTIPC and DSNTIPD.

DSN (Dataset and Database parameters KDPPZDSN)

Parameters that are related to datasets and databases. These parameters are defined on DB2 panels DSNTIP7, DSNTIP71, DSNTIP91, and DSNTIPS.

DDCS (Data Definition Control Parameters KDPPZDDCS)

Parameters that are related to data. These parameters are defined on the DB2 panel DSNTIPZ.

DSG (Data Sharing Parameters KDPPZDSG)

The parameters that are related to data sharing. These parameters are defined on the DB2 panel DSNTIPK.

SP (Stored Procedure Parameters KDPPZSP)

DSNZPARM parameters that are related to Stored Procedures. These parameters are defined on the DB2 panel DSNTIPX.

UTIL (Utility Parameters KDPPZUTL)

DSNZPARM parameters that are related to utilities. These parameters are defined on DB2 the panels DSNTIP6, DSNTIP61, and DSNTIP62.

APPL (Application Parameters KDPPZAPP)

Parameters that are related to applications. These parameters are defined on the DB2 panels DSNTIPF, DSNTIP4, and DSNTIP41.

DATA (Data Parameters KDPPZDAT)

Parameters that are related to data. These parameters are defined on the DB2 panels DSNTIPA2, DSNTIPO3, and DSNTIPM.

PERF (Performance Parameters KDPPZPF)

Parameters that are related to performance and optimization. These parameters are defined on the DB2 panels DSNTIP8, DSNTIP81, and DSNTIP82.

BP (Buffer Pool Parameters KDPPZBP)

Parameters that are related to the Default Buffer Pools. These parameters are defined on the DB2 panel DSNTIP1.

OTHER (Other System Parameters KDPPZOTH)

Miscellaneous parameters that are defined on the DB2 panels DSN6SYSP, DSN6LOGP, DSN6ARVP, DSN6SPRM, DSN6FAC, and DSNHDECP.

Searching for DSNZPARM Parameters (KDPPZFND)

To search for a DSNZPARM parameter:

1. At the command line, enter either:

- F
- FIND
- FINDM
- FINDMENU

The **Find DSNZPARM Parameters** (KDPPZFND) workspace is displayed.

2. Search for the parameter by field name or description.

Viewing object allocation data

A global view of object allocation data for a specific Db2 data sharing group.

Viewing object analysis database activity

KDPGOATS displays a high-level analysis of getpage and I/O activity from a Db2 database perspective.

Navigating to KDPGOATS

All Active Db2 Data Sharing Groups → D Group Object Analysis Database Activity

Select the corresponding tab to navigate to:

GOA DB (KDPGOATS)

A high-level analysis of getpage and I/O activity from a Db2 database perspective.

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group.

GOA DB (KDPGOATS)

Object Analysis database use by thread for a data sharing group.

GOA VOL (KDPGVOL)

An overview of the performance of the volumes that contain Db2 objects.

GOA VTH (KDPGVOLT)

The volume activity by thread workspace.

Zoom-in from KDPGOATS

S Object Analysis Activity by Spacename (KDPGOAT2)

Information about the activity of a group object by table space. With this information, you can do a more detailed analysis of the activities for a Db2 tablespace.

Viewing group object allocation data

KDPGOA displays global view of object allocation data for a specific data sharing group.

Navigating to KDPGOA

All Active DB2 Data Sharing Groups → O Group Object Analysis

Select the corresponding tab to navigate to:

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group. See [“Viewing group object allocation data”](#) on page 12.

GOA DB (KDPGOATS)

A high-level analysis of getpage and I/O activity from a DB2 database perspective. See [“Viewing object analysis database activity”](#) on page 12.

GOA TDB (KDPGOATD)

Object Analysis database use by thread for a data sharing group. See [“Viewing object analysis database threads”](#) on page 9.

GOA VOL (KDPGVOL)

An overview of the performance of the volumes that contain DB2 objects. See [“Viewing volume performance”](#) on page 13.

GOA VTH (KDPGVOLT)

The volume activity by thread workspace. See [“Viewing volume threads”](#) on page 9.

Zoom-in from KDPGOA

S Object Analysis Activity by Spacename (KDPGOAT2)

Information about the activity of a group object by table space. With this information, you can do a more detailed analysis of the activities for a DB2 tablespace.

Viewing volume performance

KDPGVOL displays and overview of the performance of volume that contain DB2 objects. With this information you can evaluate DASD performance by volume.

Navigating to KDPGVOL

All Active DB2 Data Sharing Groups → Q Group Object Analysis Volume Group Statistics

Select the corresponding tab to navigate to:

GOA DB (KDPGOATS)

A high-level analysis of getpage and I/O activity from a DB2 database perspective. See [“Viewing object analysis database activity”](#) on page 12.

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group. See [“Viewing group object allocation data”](#) on page 12.

GOA TDB (KDPGOATD)

Object Analysis database use by thread for a data sharing group. See [“Viewing object analysis database threads”](#) on page 9.

GOA VOL (KDPGVOL)

An overview of the performance of the volumes that contain DB2 objects. See [“Viewing volume performance”](#) on page 13.

GOA VTH (KDPGVOLT)

The volume activity by thread workspace. See [“Viewing volume threads”](#) on page 9.

Zoom-in from KDPGVOL

D Group Object Analysis Database Activity (KDPGOATS)

A high-level analysis of getpage and I/O activity from a DB2 database perspective. See [“Viewing object analysis database activity”](#) on page 12.

O Group Object Analysis (KDPGOA)

A global view of object allocation data for a specific data sharing group. See [“Viewing group object allocation data”](#) on page 12.

P Group Object Analysis Thread Database (KDPGOATD)

Object Analysis database use by thread for a data sharing group. See [“Viewing object analysis database threads”](#) on page 9.

S. Group Object Analysis Volume Database (KDPGVDB)

Displays information you can use to analyze I/O activity for a single volume in a DB2 database. Based on the information that this workspace provides, you can recommend changes, set up situations, and verify that your recommended changes improve system performance.

V Group Object Analysis Volume Thread (KDPGVOLT)

The volume activity by thread workspace. See [“Viewing volume threads”](#) on page 9.

H History

Near-term History provides the capability to investigate problems that occurred in the recent past.

Viewing system SQL counts for DML

KDPPSQL1 displays the system SQL counts for Data Manipulation Language (DML) for each member of a data sharing group.

Navigating to KDPPSQL1

All Active DB2 Data Sharing Groups → F Group SQL Counts

Select the corresponding tab to navigate to:

DCL (Data Control Language KDPPSQL2)

The system SQL counts for the Data Control Language (DCL) for each member of a data sharing group.

DDL (Data Definition Language KDPPSQL3)

The system SQL counts for the Data Definition Language (DDL) for each member of a data sharing group.

RID (Record Identifier List Processing KDPPSQL4)

The system SQL counts for Record Identifier (RID) List Processing for each member of a data sharing group.

PARAL (Query Parallelism KDPPSQL5)

The system SQL counts for query parallelism for each member of a data sharing group.

NESTED (Stored Procedures, User Defined Functions, Triggers KDPPSQL6)

The system SQL counts for Stored Procedures, User Defined Functions, and Triggers for each member of a data sharing group.

PREP (Prepares KDPPSQL7)

The system SQL counts for Prepares for each member of a data sharing group.

ROWID (Row ID Access KDPPSQLD)

The system SQL counts for Row ID Access for each member of a data sharing group.

CON STMT (Concentrate Literals KDPPSQL8)

The system SQL counts for Concentrate Literals for each member of a data sharing group.

USE COMMITTED (KDPPSQLA)

The system SQL counts for Use Committed for each member of a data sharing group.

WORKFILE (KDPPSQLB)

The system SQL counts for workfiles for each member of a data sharing group.

MISC (Miscellaneous KDPPSQLE)

The system miscellaneous SQL counts for each member of a data sharing group.

DMSTAT (Data Manager Statistics KDPPSQLG)

The data manager SQL statistics for each member of a data sharing group.

Viewing global and group buffer pools

KDPPGPLL displays a summary of all group buffer pools for all members of a data sharing group.

Navigating to KDPPGPLL

All Active DB2 Data Sharing Groups → S Group Buffer Pools

Select the corresponding tab to navigate to:

Global Buffer Pools (KDPPGBPO)

The global buffer pools for all members of a data sharing group. See [“Zoom-in from KDPPGBPO” on page 15](#).

Group Buffer Pools (KDPPGPLL)

A summary of all group buffer pools for all members of a data sharing group.

Zoom-in from KDPPGPLL

A Sync Read \ GBP Write (KDPPGBPS)

Sync reads, writes and the hit ratio of a group buffer pool for all members of a data sharing group.

B Prefetch \ Castout (KDPPGBPP)

Prefetch information and castout information about a group buffer pool for all members of a data sharing group.

L P-Locks (KDPPGBPL)

The P-Lock information for a group buffer pool for all members of a data sharing group.

S Secondary GBP (KDPPGBPC)

The DB2 Group Buffer Pool secondary information for all members of a data sharing group.

H History

Near-term History provides the capability to investigate problems that occurred in the recent past.

Zoom-in from KDPPGBPO

S Global Group Buffer Pool Details (KDPPGBPD)

Group buffer pool detail for all members of a data sharing group.

H History

Near-term History provides the capability to investigate problems that occurred in the recent past.

Viewing coupling facility details

KDPXCFD displays connection status information for all connections to a coupling facility structure.

Navigating to KDPXCFD

All Active DB2 Data Sharing Groups → X Coupling Facility Details

Select the corresponding tab to navigate to:

Threads (KDPPTHRD)

Provides a global view of thread activity for an entire data sharing group.

Coupling (KDPXCFD)

Connection status information for all connections to a coupling facility structure.

GOA (KDPGOA)

A global view of object allocation data for a specific data sharing group.

SQLC (KDPPSQL1)

Displays the system SQL counts for a thread for each member of a data sharing group.

DSNZPARMS (KDPPZSYS)

Displays information about DSNZPARM parameters that are related to thread management.

Lock Conf (KDPGLKGN)

The lock conflicts that exist in a data sharing group.

Buf Pool (KDPPGPLL)

A summary of all group buffer pools for all members of a data sharing group.

Viewing near-term history

Use near-term history to investigate problems that occurred in the recent past.

"H History" in the enhanced 3270UI refers to the OMEGAMON Family history based on the persistent datastore (PDS).

Chapter 4. Viewing active Db2 subsystems

The **All Active Db2 Subsystems** workspace (KDPSTART) enables you to view information about all of the active Db2 subsystems for your enterprise system. This workspace shows the general status and health of your active Db2 subsystems and provides a starting point for troubleshooting.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.



ΔDB2 ▽ID	ΔMVS ▽	ΔGroup ▽Name	Lock Esc	Timeouts	Phase 1 Commits	Active DBATs	Indoubt
— SZ21	OMP6	DBZ2	0	0	0	0	0
— SEE3	OMP6	DBEE	0	0	0	0	0
— SC12	OMP6	DBC1	0	0	0	1	0
— DC61	OMP6		0	6	0	3	0
— DB61	OMP6		2	63	0	2	0
— DA61	OMP6		0	0	0	2	0
— SZ22	OMP5	DBZ2	0	7	0	0	0
— SEE2	OMP5	DBEE	0	0	0	0	0
— SEE1	OMP5	DBEE	0	0	0	0	0

Figure 2. All Active Db2 Subsystems workspace (KDPSTART)

2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.

These options are available:

1. A (Anomaly Detection)

Display the **Anomaly Detection** panel (KDPANOM) to view information about anomalies.

2. C (CICS Threads)

Display the **Db2 CICS Threads** panel (KDPCICTH) to view information about CICS threads, CICS connections, and active threads.

3. D (Interval Statistics)

Display the **Db2 Interval Statistics** panel (KDPINTVS) to view information about Db2 intervals since the last reset.

4. E (Events)

Display the **Events** panel to specify events selection information to view information about events.

5. G (DSNZPARMs)

Display the **DSNZPARM Thread Parameters** panel (KDPZSYS) to view information about DSNZPARMs.

6. I (IMS Connections)

Display the **Db2 IMS Connections** panel (KDPIMS) to view information about the IMS regions connected to Db2.

7. J (DB2 Connect Server)

Display the **Db2 Connect Server** panel (KDPCONN) to view information about active and inactive DB2 Connect gateways.

8. K (Key Performance Indicators)

Display the **Db2 Key Performance Indicators** panel (KDPKPI1) to view a summary of thread related key performance indicators for a Db2 subsystem including connections, transactions and locking.

9. L (Lock Conflicts)

Display the **Db2 Lock Conflicts** panel (KDPLKC2) to view lock conflicts for a Db2 subsystem.

10. M (DB2 Messages)

Display the **Db2 Messages** panel (KDPMSGs) to view critical Db2 messages.

11. P (Db2 Main Screen)

Display the **Db2 Main Screen** panel (KDPSTART) which provides access to summary information about all active Db2 data sharing groups and Db2 subsystems.

12. R (Thread History)

Display the **Thread History** panel (KDPHFIL1) which provides access to information about Db2 thread history.

13. S (System Statistics)

Display the **Db2 System Resource Manager** panel (KDPSUBSM) to view information about workloads for monitored Db2 subsystems.

14. T (Active Threads)

Display the **Db2 Active Threads** panel (KDPTH52) to view thread activity for a specific Db2 subsystem and key performance data including CPU rate, in-Db2 time, wait time, Db2 status, getpage, commits and updates.

Viewing CICS threads

Use the **CICS Threads** panel (KDPCICTH) and related tabs to view Db2 thread activity that originate from connected CICS regions including key performance data such as CPU rate, in-Db2 time, wait time, Db2 status, getpage, commits and updates.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.

2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.

3. In the option menu, select option **2** (C CICS Threads) and press Enter.

The **Db2 CICS Threads** panel (KDPCICTH) shows the following tabs:

CICS Threads (KDPCICTH)

View information about CICS Threads.

CICS Connections (KDPCICS3)

View an overview of Db2 thread activity that is originating from connected CICS subsystems.

Db2 Active Threads (KDPTH52)

View thread activity for a specific Db2 subsystem and provides key performance data such as CPU rate, in-Db2 time, wait time, Db2 status, getpage, commits and updates. For more information, see [“Viewing active threads”](#) on page 34.

4. To perform actions for Db2 active threads, on the **CICS Threads** tab, type a / in the line command field next to the plan of interest and press Enter.

These options are available:

C Cancel Thread (KDPTCANC)

Cancel a thread.

A Thread Detail Accelerator (KDPTHADC)

View accelerator metrics for an active thread.

D Thread Detail Distributed (KDPTHDD2)

View the VTAM APPC conversations and TCP/IP conversations of a distributed (DDF) thread.

E Thread Detail Enclave (KDPTHDE2)

View workload manager (WLM) enclave service periods.

L Thread Detail Locks Owned (KDPTHLDL)

View locks and the claims that are owned by an individual thread.

N Thread Detail Long Names (KDPTHNDN)

View the long names (identification fields) associated with a specific thread.

Q Thread Detail SQL Counts (KDPTSQ1)

View SQL counts for the Data Manipulation Language (DML) for a thread.

S Thread Detail Accounting (KDPTHDA2)

View accounting classes 1 and 2 for a selected thread. The following options are available:

CICS Region Summary (KCPRGNS)

Shows a summary of the CICS Region and provides the following options:

! Take Actions on Task (KDPTASAP)

Take action on a task.

D CICS DB2 Connection Summary (KCPD2S or KCPD2P)

View information about CICS Db2 connections.

B CICS Bottlenecks (KDPBOTS)

View information about CICS bottlenecks.

F CICS File/Data Resources (CICS File/Data menu)

View information about CICS files and data resources.

R CICS Resources (CICS Resources option menu)

View information about CICS resources.

S CICS Region Overview (KCPRGNO)

View information about CICS regions.

T CICS Task Summary (KDPTASS)

View information about CICS tasks.

Transaction Details (KCPTRND)

View a information about CICS transactions.

Program Details (KDPPRGD)

View information about CICS programs.

Details for Transaction Task (KCPTASD)

View information about CICS transaction tasks.

T Thread Detail SQL Text (KDPTSQLT)

View the SQL statement a Db2 thread is currently executing.

W Thread Detail Class 3 (KDPTHRD3)

View accounting class 3 wait times for a selected thread.

X Multi-thread Cancel No Confirm

Cancel multiple threads without being prompted individually to confirm each thread cancellation.

Viewing DSNZPARM parameters

Use the **DSNZPARM Thread Parameters** panel (KDPZSYS) and related tabs to view information about DSNZPARM parameters related to thread management.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **5** (G DSNZPARMs) and press Enter.

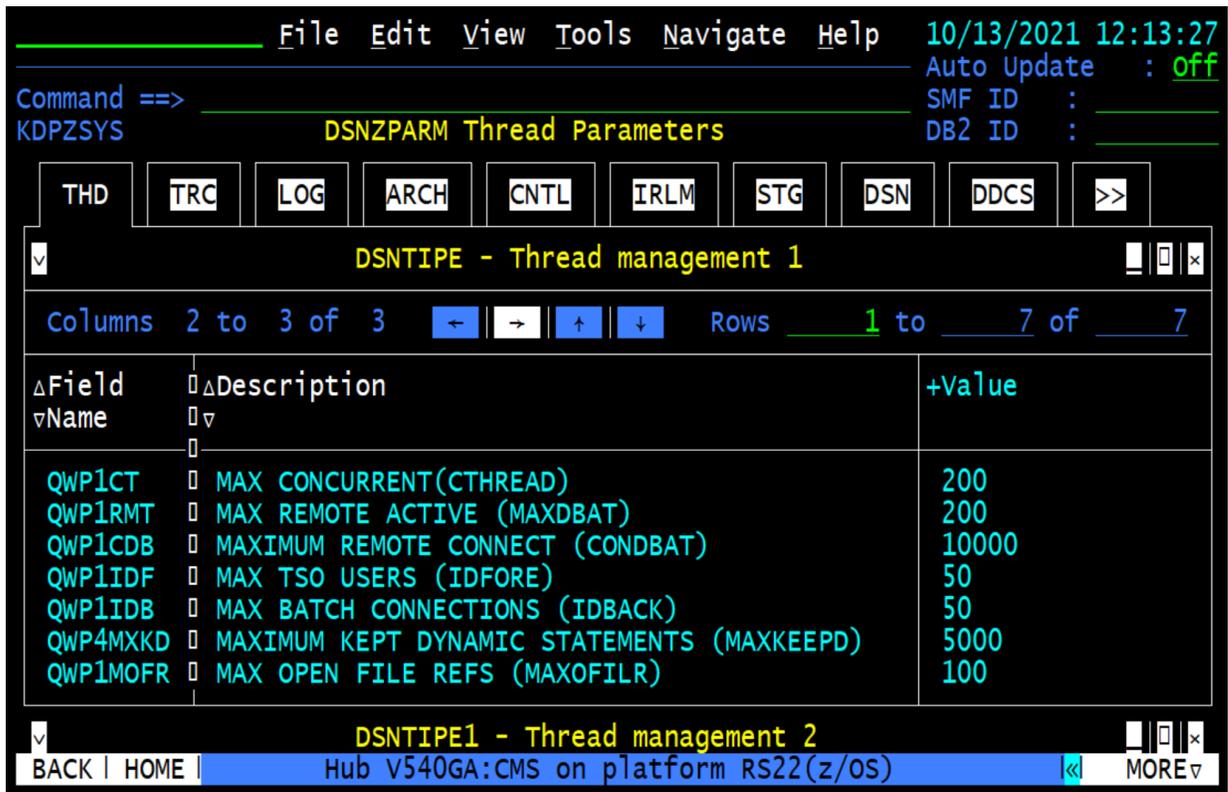


Figure 3. DSNZPARM Thread Parameters - DSNTIPE Thread Management 1 tab (KDPZSYS)

The **DSNZPARM Thread Parameters** panel (KDPZSYS) shows the following tabs:

THD (DSNZPARM Thread Parameters - KDPZSYS)

View information about thread management parameters that are defined on the Db2 panels DSNTIPE and DSNTIPE1.

TRC (DSNZPARM Trace Parameters - KDPZTRC)

View information about trace parameters that are defined on the Db2 panel, DSNTIPN.

LOG (DSNZPARM Logging Parameters - KDPZLOG)

View information about active log parameters that are defined on the Db2 panel, DSNTIPL.

ARCH (DSNZPARM Archiving Parameters - KDPZARC)

View information about log archiving parameters that are defined on the Db2 panels DSNTIPA and DSNTIPH.

CNTL (DSNZPARM Authorization/RLF/DDF parameters - KDPZCTL)

View information about operator function parameters that are defined on the Db2 panels DSNTIPO, DSNTIPP, DSNTIPP1, DSNTIPR and DSNTIP5.

IRLM (DSNZPARM IRLM Parameters - KDPZIRLM)

View information about IRLM parameters that are defined on the Db2 panels DSNTIPI and DSNTIPJ.

STG (DSNZPARM Storage Parameters - KDPZSTG)

View information about storage parameters that are defined on the Db2 panels DSNTIPC and DSNTIPD.

DSN (DSNZPARM Dataset and Database Parameters - KDPZDSN)

View information about data set and database parameters that are defined on the Db2 panel DSNTIPZ.

DDCS (DSNZPARM Data Definition Control Parameters - KDPZDDCS)

View information about data definition control parameters that are defined on the Db2 panel DSNTIPZ.

DSG (DSNZPARM Data Sharing Parameters - KDPZDSG)

View information about data sharing parameters that are defined on the Db2 panel DSNTIPK.

SP (DSNZPARM Stored Procedure Parameters - KDPZSP)

View information about stored procedure parameters that are defined on the Db2 panel DSNTIPX.

UTIL (DSNZPARM Utility Parameters - KDPZUTIL)

View information about utility parameters that are defined on Db2 the panels DSNTIP6, DSNTIP61, and DSNTIP62.

APPL (DSNZPARM Application Parameters - KDPZAPPL)

View information about application parameters that are defined on the Db2 panels DSNTIPF, DSNTIP4, and DSNTIP41.

DATA (DSNZPARM DATA Parameters - KDPZDATA)

View information about data parameters that are defined on the Db2 panels DSNTIPA2, DSNTIPO3, and DSNTIPM.

PERF (DSNZPARM Performance Optimization Parameters - KDPZPERF)

View information about performance optimization parameters that are defined on the Db2 panels DSNTIP8, DSNTIP81, and DSNTIP82.

BP (DSNZPARM Buffer Pools Parameters - KDPZBP)

View information about default buffer pool parameters that are defined on the Db2 panel DSNTIP1.

OTHERS (DSNZPARM Other System Parameters - KDPZOTH)

View information about miscellaneous parameters that are defined on the Db2 panels DSN6SYSP, DSN6LOGP, DSN6ARVP, DSN6SPRM, DSN6FAC, and DSNHDECP.

ALL (All DSNZPARMS - KDPZPARM)

View information about parameters related to DSNZPARM.

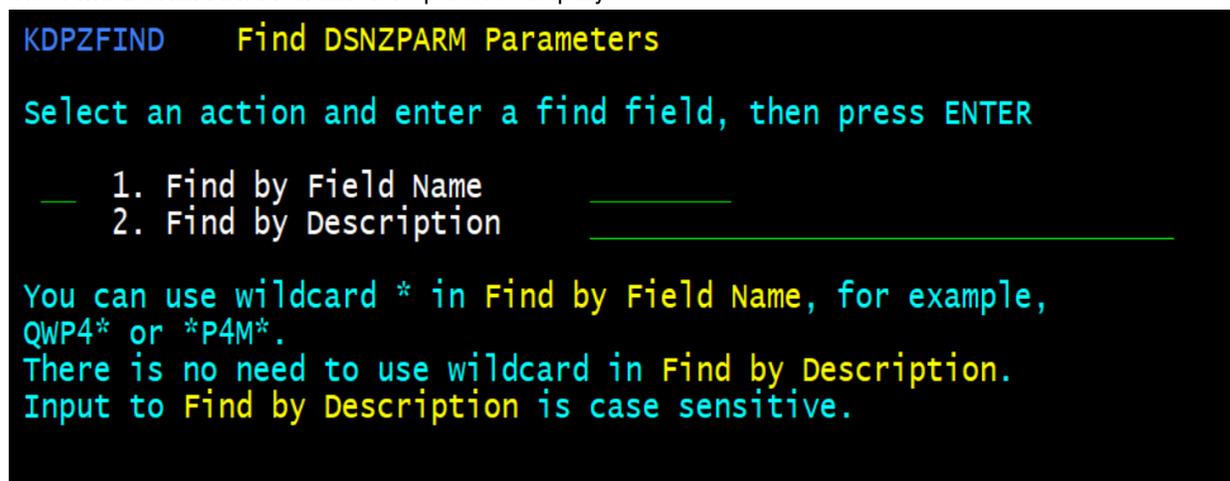
Searching for DSNZPARM parameters

The **Find DSNZPARM Parameters** panel enables you to easily search for DSNZPARM parameters of interest by field name or description.

Procedure

1. In the Command line, type F and press Enter.

The **Find DSNZPARM Parameters** panel is displayed.



```
KDPZFIND      Find DSNZPARM Parameters

Select an action and enter a find field, then press ENTER

  1. Find by Field Name      _____
  2. Find by Description     _____

You can use wildcard * in Find by Field Name, for example,
QWP4* or *P4M*.
There is no need to use wildcard in Find by Description.
Input to Find by Description is case sensitive.
```

Figure 4. **Find DSNZPARM Parameters** panel (KDPZFIND)

2. Specify the type of find action you want to perform (by field name or by description) and specify a find value.

- Type 1 in the option field (to find a parameter by its field name) and type the field name you are searching for in the entry field (you can use a wildcard (*), for example: QWP4*).
- Type 2 in the option field (to find a parameter by its description) and type the field description you are searching for in the entry field (wildcards are not needed, this entry field is case sensitive).

3. Press Enter.

Example

To find the field name QWP1DTIM with the description DATASET STATS TIME, specify action 1 (Find by Field Name) and type QWP1DTIM in the entry field.

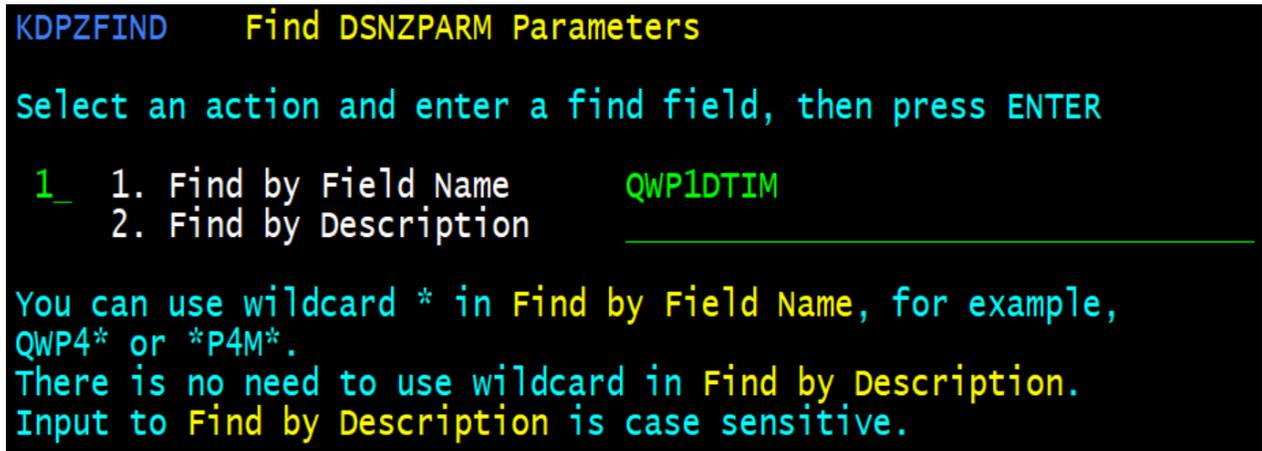


Figure 5. Finding the QWP1DTIM field by field name

The results of the find are as follows:

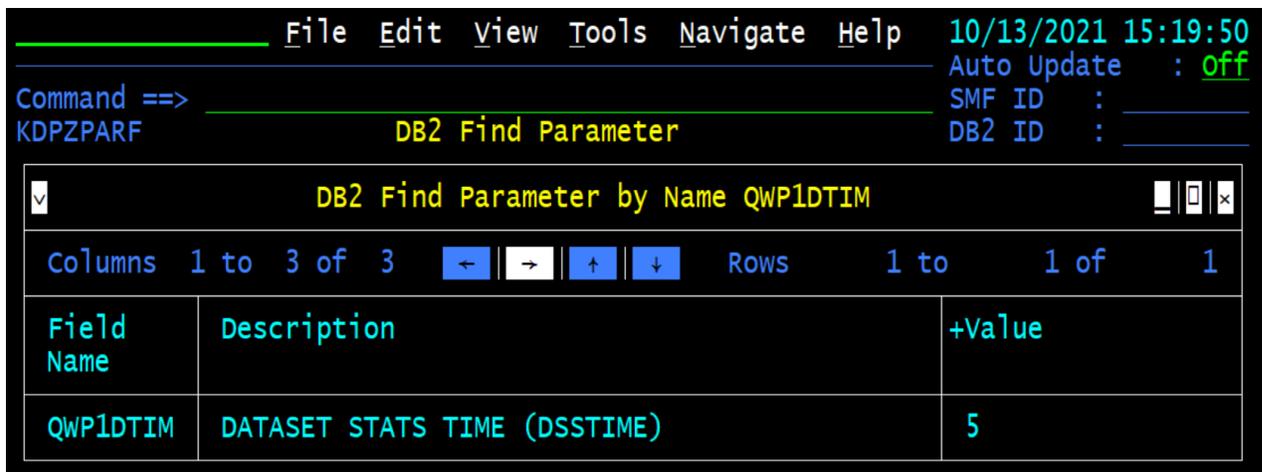


Figure 6. Results of the QWP1DTIM find based on field name

To find all field names starting with QWP1ID, specify action 1 (Find by Field Name) and type QWP1ID* in the entry field.

```

KDPZFIND      Find DSNZPARM Parameters

Select an action and enter a find field, then press ENTER

1_  1. Find by Field Name      QWP1ID*_
    2. Find by Description      _____

You can use wildcard * in Find by Field Name, for example,
QWP4* or *P4M*.
There is no need to use wildcard in Find by Description.
Input to Find by Description is case sensitive.

```

Figure 7. Finding all field names starting with QWP1ID

The results of the find are as follows:

```

_____ File Edit View Tools Navigate Help 10/13/2021 15:29:24
Auto Update : off
Command ==>
KDPZPARF      DB2 Find Parameter      SMF ID : _____
DB2 ID : _____

DB2 Find Parameter by Name QWP1ID*
Columns 1 to 3 of 3  Rows 1 to 2 of 2
Field Name      Description      +Value
QWP1IDF      MAX TSO USERS (IDFORE)      50
QWP1IDB      MAX BATCH CONNECTIONS (IDBACK)      50

```

Figure 8. Finding all field names starting with QWP1ID

Viewing IMS connections

Use the **Db2 IMS Connections** panel (KDPIMS) to view information about each IMS region connected to Db2.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **6** (I IMS Connections) and press Enter.

The **IMS Connections** panel (KDPIMS) provides the following option:

IMS Region Information (KDPIMSRG)

Detailed status information for a specific IMS dependent region.

Viewing Db2 Connect Server gateways

Use the **Db2 Connect Server** panel (KDPCONN) to view key information about active and inactive Db2 Connect gateways.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **7** (J Db2 Connect Server) and press Enter.

The **Db2 Connect Server** panel (KDPCONN) shows the following tabs:

K. Package statistics (KDPCPKG)

View information about the size of the data exchanged between the Db2 Connect gateway and the host database and about the network time required. Measure the throughput between the host database and the Db2 Connect gateway and view database activity and network traffic at the application level.

P. Performance (KDPCPERF)

View information obtained by running a sample SQL statement between the Db2 Connect gateway and the host database and detect bottlenecks.

S. Gateway statistics (KDPCONNS)

View statistics about the selected Db2 Connect gateway including details about the number of agents and pooled agents, the connections that are waiting for the host to reply, and the connections that are waiting for the client to send a request.

T. Task list (KDPCTASK)

View statistics about the processes at the selected Db2 Connect gateway, for example, the CPU and the working set. Determine whether the DB2 Connect gateway is overloaded by Db2 Connect or other allocation applications.

H. History

View near-term history and investigate problems that occurred in the recent past.

Viewing key performance indicators

Use the **Db2 Key Performance Indicators** panel (KDPKPI1) to view key information about thread related Key Performance Indicators (KPIs) for a Db2 subsystem including connections, transactions, and locking KPIs.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **8** (K Key Performance Indicators) and press Enter.

The **DB2 Key Performance Indicators** panel (KDPKPI1) shows the following tabs:

Thread KPI (KDPKPI1)

View information about thread related Key Performance Indicators (KPIs) for a Db2 subsystem including connections, transactions, and locking KPIs.

Pools & Storage KPI (KDPKPI2)

View information about pool and storage related KPIs for a Db2 subsystem including Db2 pools, storage, buffer pools, sorting and group buffer pools KPIs.

Miscellaneous KPI (KDPKPI3)

View statistics about miscellaneous KPIs for a Db2 subsystem including monitoring, logging, stored procedures, user defined functions, and query parallelism KPIs.

System States (KDPKPI4)

View statistics about Db2 system and thread related performance data including thread, stored procedures, user defined functions, triggers, locks, and open data sets.

Viewing locking conflicts

KDPLKC2 displays the lock conflicts that exist for a DB2 subsystem.

Navigating to KDPLKC2

All Active DB2 Subsystems → L Locking Conflicts

Zoom-in from KDPLKC2

Thread Locks Owned (KDPTHRL)

Detailed information about the locks and the claims that are owned by an individual thread.

Viewing Db2 messages

KDPMSGs displays critical DB2 messages sorted by message identification number.

Navigating to KDPMSGs

All Active DB2 Subsystems → M DB2 Messages

Zoom-in from KDPMSGs

S Critical DB2 Messages (KDPMSGC)

Displays messages that can help you identify problems with your DB2 system.

H History DB2 Messages (KDPMSGH)

Display historical DB2 messages that can help you diagnose performance problems in the past.

Viewing thread history

Use the **Thread History Timespan Selection** panel (KDPHFIL1) and related tabs to refine your view of thread history data.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **12** (R Thread History) and press Enter.

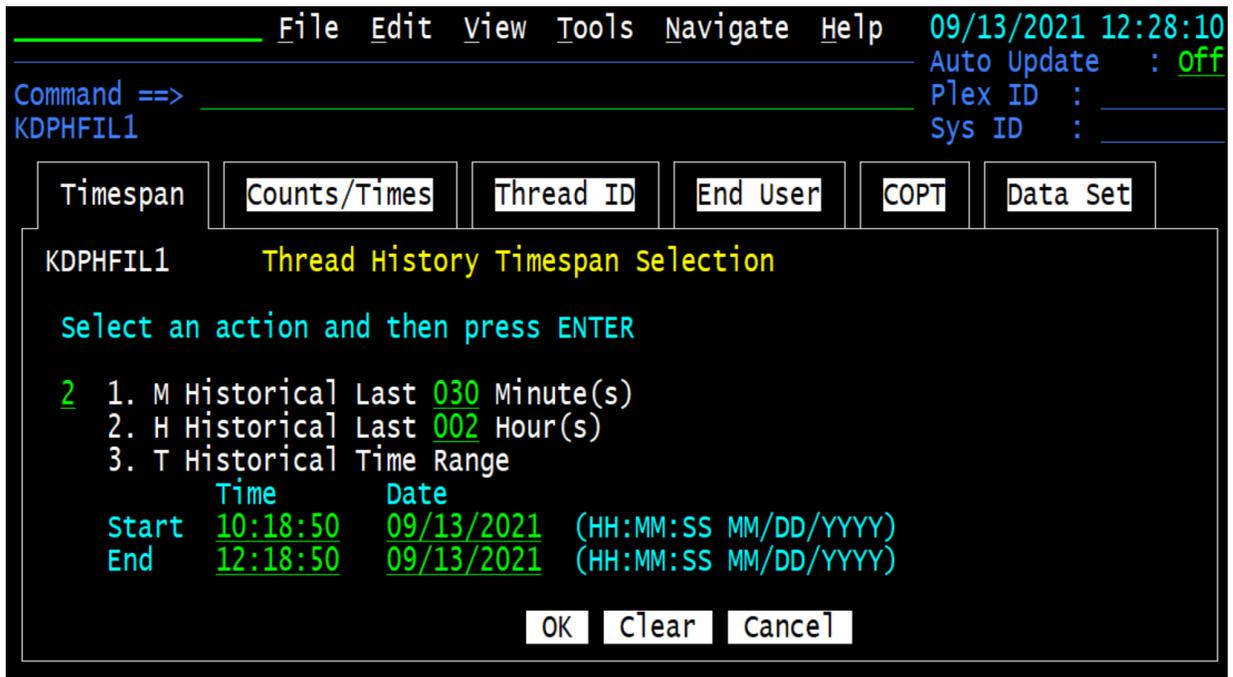


Figure 9. Thread History Timespan Selection tab (KDPHFIL1)

The **Thread History Timespan Selection** panel shows the following tabs:

Timespan (KDPHFIL1)

Refine your view of thread history information by specifying timespan criteria.

Counts/Times (KDPHFIL2)

Refine your view of thread history information by specifying counts and time based criteria.

Thread ID (KDPHFIL3)

Refine your view of thread history information by specifying thread ID selection criteria.

End User (KDPHFIL4)

Refine your view of thread history information by specifying end user selection criteria.

COPT (KDPHCOPT)

View thread history data collection options for the Db2 subsystem.

Data Set (KDPHDSET)

View thread history data set status for the Db2 subsystem.

4. To refine your view of thread history information based on a selected timespan, select the **Timespan** tab and enter one of the following options:

- a) Specify the appropriate option for your selection criteria.

Valid options are:

1 M Historical Last ___ Minute(s)

Type **1** in the selection field and adjust the desired number of minutes as appropriate (default 030) to specify the number of minutes before the current time to set the beginning of the reporting period. Leading zeros are required.

2 H Historical Last ___ Hour(s)

Type **2** in the selection field and adjust the desired number of hours as appropriate (default 002) to specify the number of hours before the current time to set the beginning of the reporting period. Leading zeros are required.

3. T Historical Time Range

Type **3** in the selection field and adjust the desired time range as appropriate (start time/date and end time/date) to specify the start and end time for the reporting period. The date is in the format MM/DD/YYYY and the time is in the format.

- b) Click **OK** to apply your selection criteria.
5. To refine your view of thread history information based on counts and time criteria, select the **Counts/Times** tab:

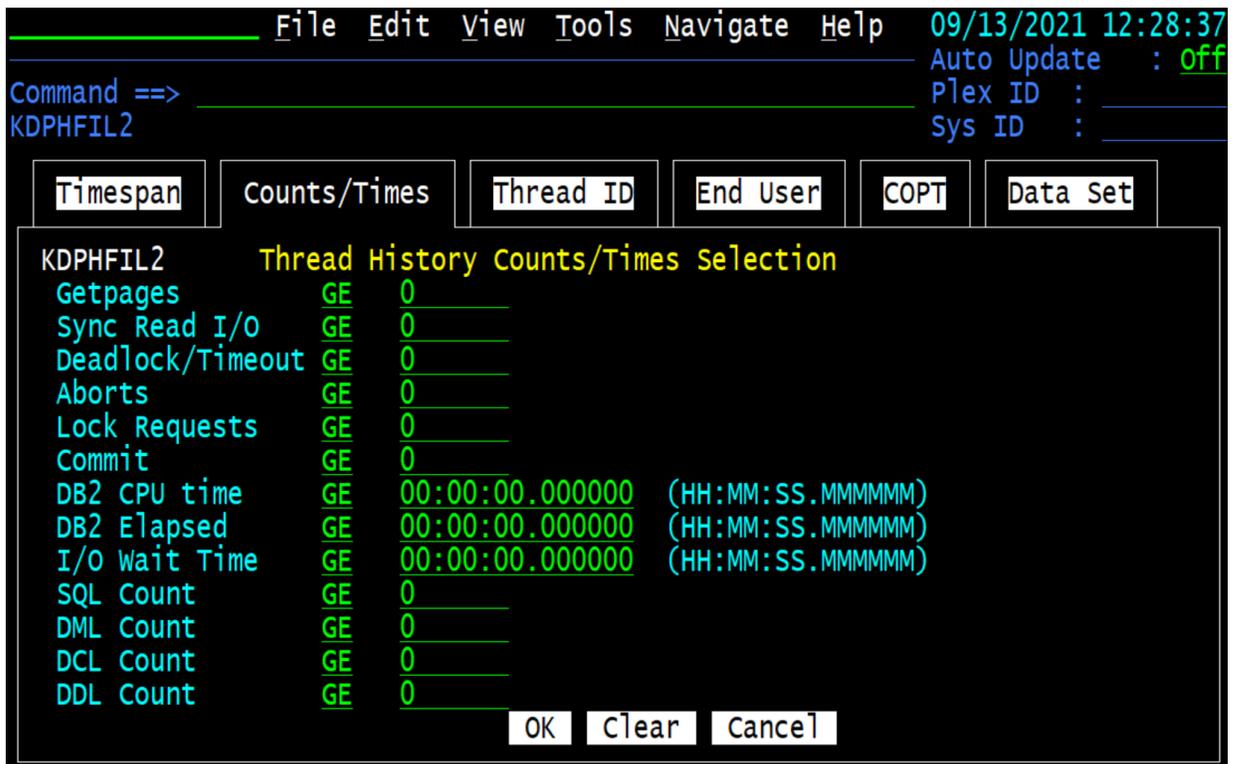


Figure 10. Thread History Counts/Times Selection tab (KDPHFIL2)

- a) Specify the appropriate operator for your selection criteria.
Valid operators are **EQ** (Equal) and **NE** (Not Equal). The wild cards * and ? are supported. Use ? to match a single character. Use * to match the rest of the string.

- b) Specify the appropriate values for your selection criteria:

Getpages

The number of getpage requests.

Sync Read I/O

The number of synchronous read I/Os performed.

Deadlock/Timeout

The number of deadlocks and timeouts that occurred.

Aborts

The number of aborts performed by the thread.

Lock Requests

The number of IRLM lock requests.

Commit

The number of commits performed by the thread.

Db2 CPU Time

The IN-DB2 CPU time in the format *HH:MM:SS.MMMMMM*.

Db2 Elapsed

The IN-DB2 elapsed time in the format *HH:MM:SS.MMMMMM*.

I/O Wait Time

The I/O wait time in the format *HH:MM:SS.MMMMMM*.

SQL Count

The total number of DCL, DDL, and DML SQL calls issued.

DML Count

The total number of DML SQL calls issued by the thread.

DCL Count

The total number of DCL SQL calls issued by the thread.

DDL Count

The total number of DDL SQL calls issued by the thread.

c) Click **OK** to apply your selection criteria.

6. To refine your view of thread history information based on thread ID criteria, select the **Thread ID** tab:

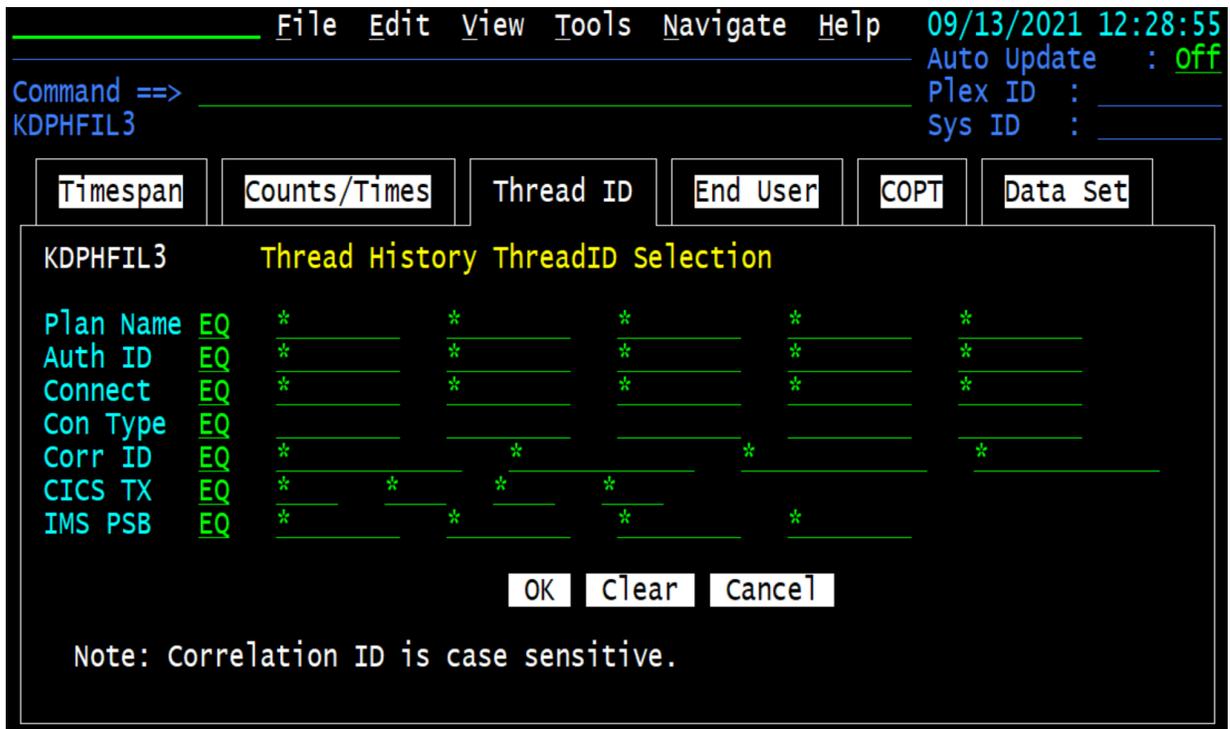


Figure 11. Thread History Thread ID Selection tab (KDPHFIL3)

a) Specify the appropriate operator for your selection criteria.

Valid operators are EQ (Equal) and NE (Not Equal). The wild cards * and ? are supported. Use ? to match a single character. Use * to match the rest of the string.

b) Specify the appropriate values for your selection criteria:

Plan Name

The the plan names.

Auth ID

The authorization identifiers.

Connect

The connection identifiers. Not valid on end-of-memory. Reflects the z/OS home ASID connection name. Valid values are:

Batch

BATCH

TSO

TSO

QMF

DB2CALL

Utility

UTILITY

Db2 Internal

DB2 SUBSYSTEM ID

IMS

IMS-ID

CICS

CICS-ID

RRSAF

RRSAF

Distributed database access threads

For threads from a Db2 requester, this field contains the connection name of the thread at the requesting location.

Con Type

The connection types. Possible connection types include: TSO, CALLATCH, DLI, CICS, IMSBMP, IMSMPP, DRDA (Distributed), IMSCTRL, IMSTBMP, UTILITY, RRSF. The supported operators for this field are EQ and NE. Wild cards are not supported.

Corr ID

The correlation ID up to 12 bytes in length. This field is case sensitive.

CICS TX

The CICS transaction ID.

IMS PSB

The IMS PSB name. The supported operators for this field are EQ and NE. The wild cards * and ? are supported. Use ? to match a single character. Use * to match the rest of the string.

c) Click **OK** to apply your selection criteria.

7. To refine your view of thread history information based on end user criteria, select the **End User** tab:

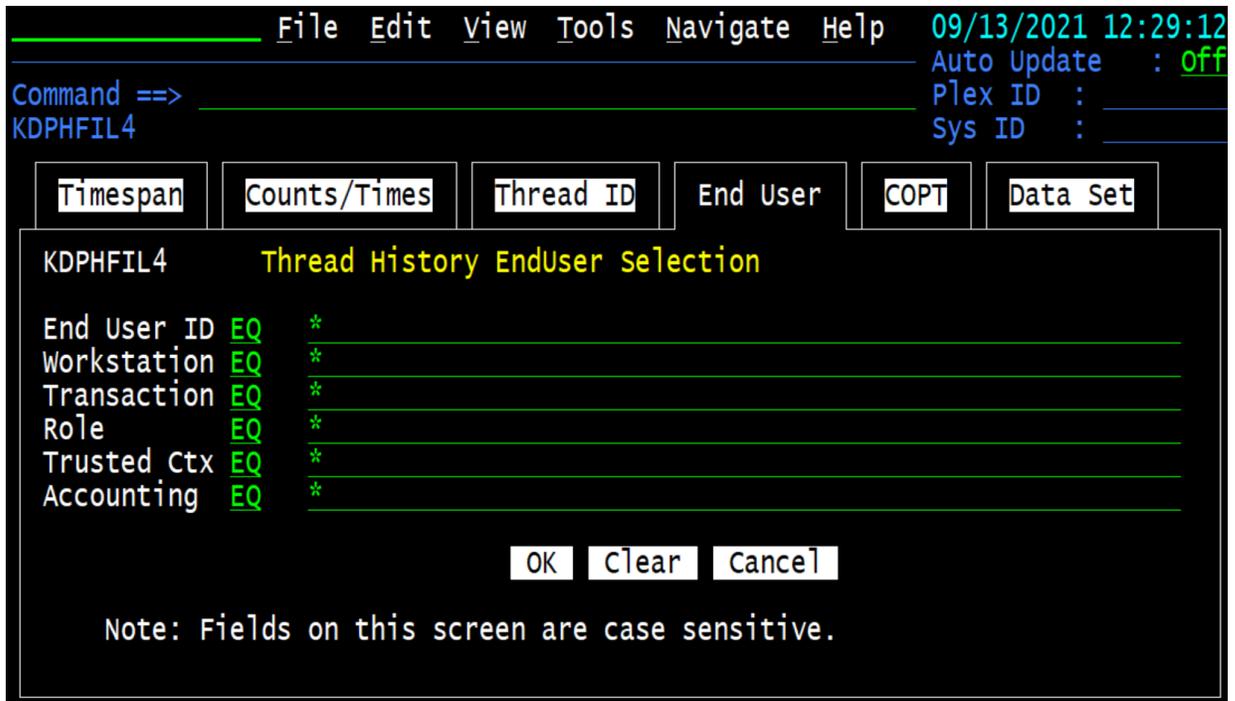


Figure 12. Thread History End User Selection tab (KDPHFIL4)

a) Specify the appropriate operator for your selection criteria.

Valid operators are EQ (Equal) and NE (Not Equal). The wild cards * and ? are supported. Use ? to match a single character. Use * to match the rest of the string.

b) Specify the appropriate values for your selection criteria:

End User ID

The end user's userid, up to 56 bytes.

Workstation

The end user's workstation name, up to 56 bytes.

Transaction

The end user's transaction, up to 56 bytes.

Role

The role name, up to 56 bytes, that is associated with the authorization ID, if running in a trusted context.

Trusted Ctx

The trusted context name, up to 56 bytes, if running in a trusted context.

Accounting

The accounting string up to 56 bytes for the agent. For DSN type, it is the first 56 bytes of QMDAACT. For JCC/SQL types, it is the first 56 bytes of QMDASUF. For other types, it is the first 56 bytes of QMDAASTR.

c) Click **OK** to apply your selection criteria.

8. To view data collection options information, select the **COPT** tab:

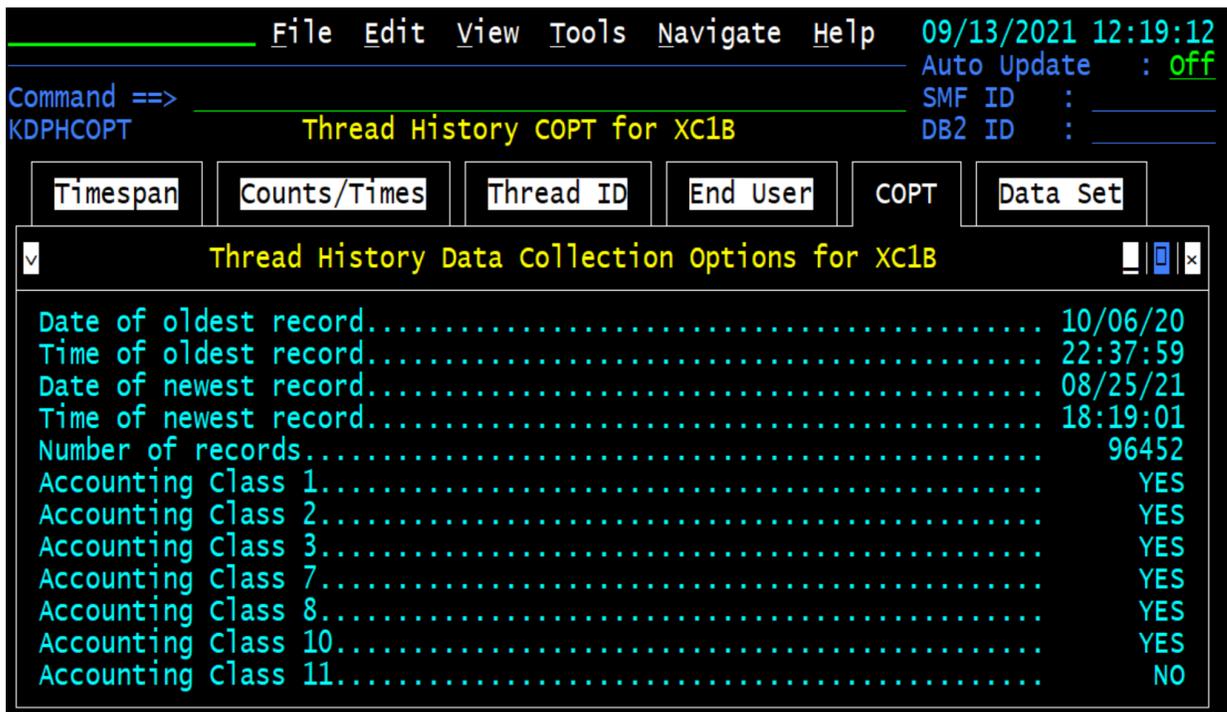


Figure 13. Thread History Data Collection Options tab (KDPHCOPT)

The following information is shown:

Date of Oldest Record

The date of the oldest record in the thread history.

Time of Oldest Record

The time of the oldest record in the thread history.

Date of Newest Record

The date of the newest record in the thread history.

Time of Newest Record

The time of the newest record in the thread history.

Number of Records

The number of records in the thread history

Accounting Class n

Indicates the accounting classes associated with the thread history.

TH Sort

Indicates whether thread history is collecting sort data. Valid values are:

NO

(Default) Thread history is not collecting sort data.

Note: This field is not yet implemented. The only valid value at this time is NO.

YES

Thread history is collecting sort data.

TH Scan

Indicates whether thread history is collecting scan data. Valid values are:

NO

(Default) Thread history is not collecting scan data.

Note: This field is not yet implemented. The only valid value at this time is NO.

YES

Thread history is collecting scan data.

TH Lock Contention

Indicates whether thread history is collecting lock contention data. Valid values are:

NO

(Default) Thread history is not collecting lock contention data.

Note: This field is not yet implemented. The only valid value at this time is NO.

YES

Thread history is collecting lock contention data.

TH Lock Suspension

Indicates whether thread history is collecting lock suspension data. Valid values are:

NO

(Default) Thread history is not collecting lock suspension data.

Note: This field is not yet implemented. The only valid value at this time is NO.

YES

Thread history is collecting lock suspension data.

TH Dynamic SQL

Indicates whether thread history is collecting dynamic SQL text data (short, up to 5000 characters). Valid values are:

NO

(Default) Thread history is not collecting dynamic SQL text data (short).

Note: This field is not yet implemented. The only valid value at this time is NO.

YES

Thread history is collecting dynamic SQL text data (short).

TH Dynamic SQL 350

Indicates whether thread history is collecting dynamic SQL text data (long, full text). Valid values are:

NO

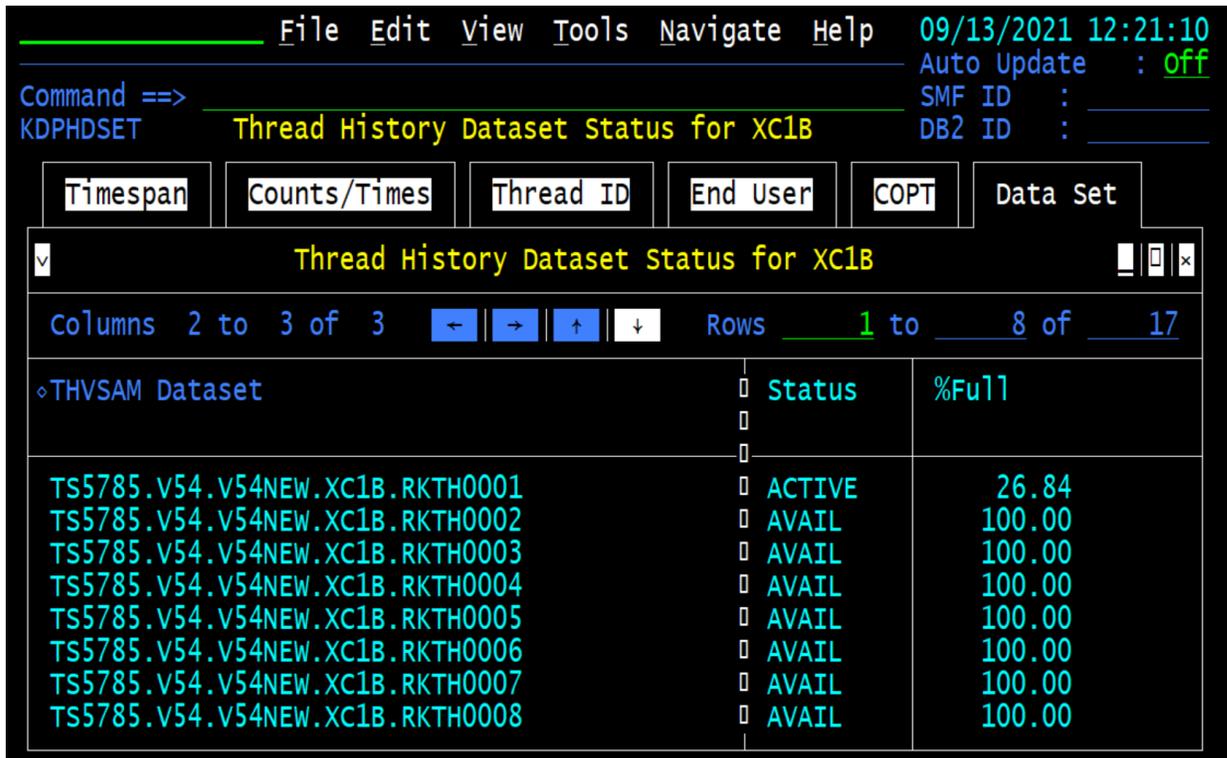
(Default) Thread history is not collecting dynamic SQL text data (long).

Note: This field is not yet implemented. The only valid value at this time is NO.

YES

Thread history is collecting dynamic SQL text data (long).

9. To view data set status information, select the **Data Set** tab:



The screenshot shows the 'Thread History Dataset Status for XC1B' panel. At the top, there is a menu bar with 'File', 'Edit', 'View', 'Tools', 'Navigate', and 'Help'. The date and time are '09/13/2021 12:21:10'. Below the menu bar, the command 'KDPHDSET' is entered. The panel title is 'Thread History Dataset Status for XC1B'. There are several tabs: 'Timespan', 'Counts/Times', 'Thread ID', 'End User', 'COPT', and 'Data Set'. The 'Data Set' tab is selected. Below the tabs, there is a table with the following data:

THVSAM Dataset	Status	%Full
TS5785.V54.V54NEW.XC1B.RKTH0001	ACTIVE	26.84
TS5785.V54.V54NEW.XC1B.RKTH0002	AVAIL	100.00
TS5785.V54.V54NEW.XC1B.RKTH0003	AVAIL	100.00
TS5785.V54.V54NEW.XC1B.RKTH0004	AVAIL	100.00
TS5785.V54.V54NEW.XC1B.RKTH0005	AVAIL	100.00
TS5785.V54.V54NEW.XC1B.RKTH0006	AVAIL	100.00
TS5785.V54.V54NEW.XC1B.RKTH0007	AVAIL	100.00
TS5785.V54.V54NEW.XC1B.RKTH0008	AVAIL	100.00

Figure 14. Thread History Data Collection Options tab (KDPHDSET)

The following information is shown:

THVSAM Dataset

The thread history VSAM data set.

Status

The status of the thread history VSAM data set.

%Full

The percentage full the thread history VSAM data set is.

Viewing system statistics

Use the **Subsystem Management Summary** panel (KDPSUBSM) and related tabs to view information about Db2 subsystem resources.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **13** (S System Statistics) and press Enter.

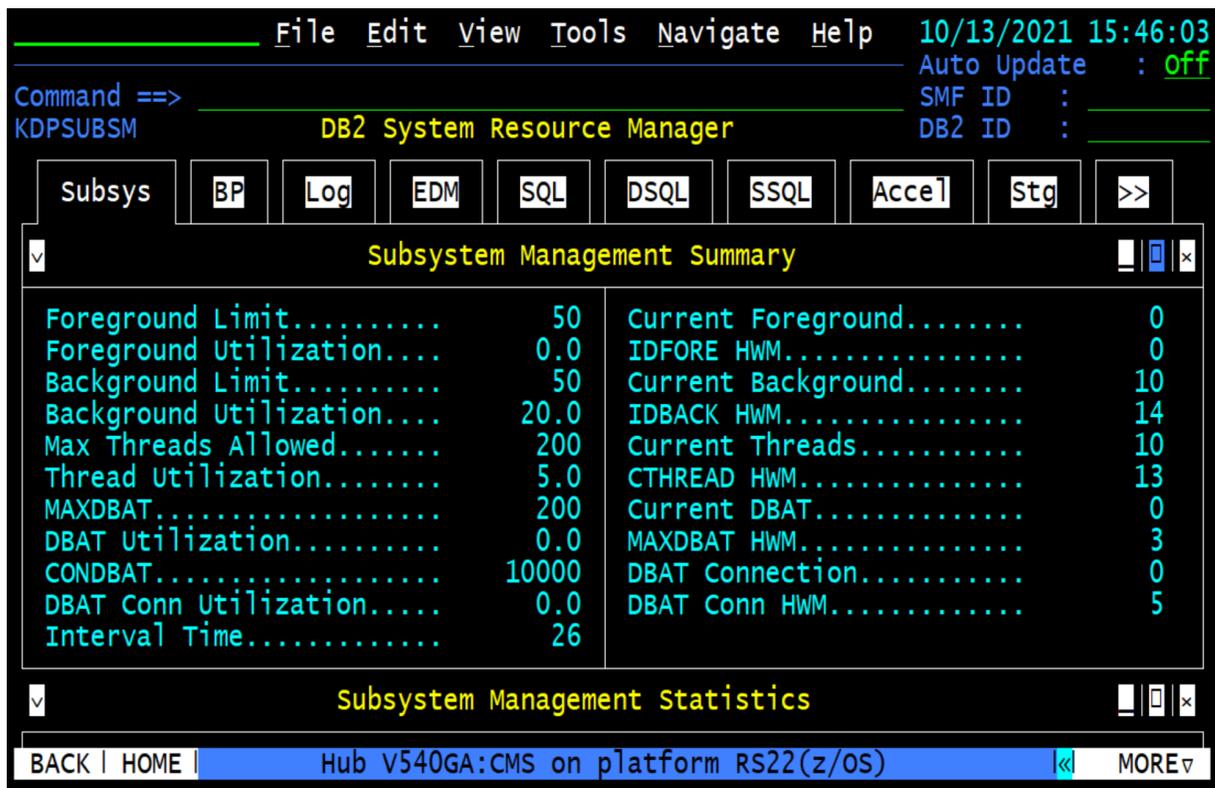


Figure 15. Subsystem Management Summary panel (KDPSUBSM)

The **DB2 System Resource Manager** panel (KDPSUBSM) shows the following tabs:

Subsys (Subsystem Management Summary - KDPSUBSM)

View information about workloads for a Db2 subsystem.

BP (Db2 Buffer Pools - KDPBP54)

View information about the buffer pools that are configured and in use for a Db2 subsystem.

Log (Db2 Log Management - KDPLOGSB)

View information about Db2 log manager active logging and archiving activity.

EDM (Db2 EDM Pool - KDPEDMN)

View information about Environmental Descriptor Manager (EDM) pool activity for a Db2 subsystem.

SQL (SQL Counts - Data Manipulation Language - KDPSQL1)

View information about the SQL counts for the Data Manipulation Language (DML) for a Db2 subsystem.

DSQL (Dynamic SQL Cache Filter Options - KDPDSQLF)

Specify filter options to manage the data returned from the Dynamic SQL cache. The default filter option settings display the first 100 statements in descending order of the accumulated CPU time. The results are displayed in the **Db2 Dynamic SQL Cache Statement Statistics** workspace (KDPDSQLS).

SSQL (DB2 Static SQL Cache Statement Statistics - KDPSSQLS)

View information about the static SQL cache to evaluate performance.

Accel (Accelerators - KDPACCN)

View information about configured accelerators.

Stg (DBM1 and MVS Storage Below 2 GB - KDPSTO2A)

View information about Db2 subsystem storage consumption.

Z/OS (DB2 z/OS System Statistics - KDPZOS)

View information about overall CPU usage, paging, real storage usage, and virtual storage usage by Db2.

Lock (Lock Manager Information - KDPLOK1)

View information about current locking activity, latch statistics counters, and IRLM latch contentions.

Viewing active threads

Use the Db2 Active Threads panel (KDPTH52) to view thread activity for a specific Db2 subsystem, including key performance data such as CPU rate, in-Db2 time, wait time, Db2 status, getpage, commits, and updates.

Procedure

1. Select the **Db2** tab on the **OMEGAMON Products** panel to show the **All Active Db2 Subsystems** workspace.
2. Type a / in the line command field next to the Db2 subsystem of interest and press Enter.
3. In the option menu, select option **14** (T Active Threads) and press Enter.

The **Db2 Active Threads** panel (KDPTH52) shows the following tabs:

Active Threads

Shows information about Db2 Active Threads.

CICS

Shows a summary of CICS threads (KDPTHICIS).

Utilities

Shows an overview of the active utilities, including utilities that have not yet completed their run due to of abnormal termination (KDPUTILS).

ResMgr

Shows the Db2 System Resource Manager (KDPSUBSM).

KPI

Shows the Db2 Key Performance Indicators (KDPKPI1).

4. To perform actions for Db2 active threads, on the **Active Threads** tab, type a / in the line command field next to the plan of interest and press Enter.

These options are available:

C Cancel Thread (KDPTCANC)

Cancel a thread.

A Thread Detail Accelerator (KDPTHADC)

View information about accelerator metrics for an active thread.

B Thread Detail Buffer Pool

View information about buffer pools for an active thread.

D Thread Detail Distributed (KDPTHDD2)

View information about the VTAM APPC conversations and TCP/IP conversations of a distributed (DDF) thread.

E Thread Detail Enclave (KDPTHDE2)

View information about the workload manager (WLM) enclave service periods.

G Thread Detail Group Buffer Pool

View information about group buffer pools for an active thread.

L Thread Detail Locks Owned (KDPTHLDL)

View information about the locks and the claims that are owned by an individual thread.

N Thread Detail Long Names (KDPTHNDN)

View the long names (identification fields) that are associated with a specific thread.

Q Thread Detail SQL Counts (KDPTSQL1)

View the SQL counts for the Data Manipulation Language (DML) for a thread.

S Thread Detail Accounting (KDPTHDA2)

View the accounting classes 1 and 2 for a selected thread. From the CICS Transaction Details subpanel, zoom in to:

- **CICS Region Summary (KCPRGNS)** : zoom into:
 - ! Take Actions on Task (**KDPTASAP**)
 - D CICS DB2 Connection Summary (**KCPD2S** or **KCPD2P**)
 - B CICS Bottlenecks (**KDPBOTS**)
 - F CICS File/Data Resources (**CICS File/Data** option menu)
 - R CICS Resources (**CICS Resources** option menu)
 - S CICS Region Overview (**KCPRGNO**)
 - T CICS Task Summary (**KDPTASS**)
- **Transaction ID**: navigate to CICS workspace **Transaction Details (KCPtrND)**.
- **Current Program ID**: navigate to CICS workspace **Program Details (KDPPRGD)**.
- **Task Number**: navigate to CICS workspace **Details for Transaction Task (KCPTASD)**.

T Thread Detail SQL Text (KDPTSQLT)

The SQL statement that a DB2 thread is currently executing.

U Thread CICS Connection (KDPTHIC)

Display CICS connection information for a CICS thread.

V Run EXPLAIN

Run EXPLAIN for a Db2 thread.

W Thread Detail Class 3 (KDPTH3)

The accounting class 3 wait times for a selected thread.

X Multi-thread Cancel No Confirm

Cancel multiple threads without being prompted individually to confirm each thread cancellation.

Chapter 5. Using thread history

OMEGAMON for DB2 thread history in the Enhanced 3270UI is the equivalent of near-term history in the Classic Interface.

Database administrators and systems analysts use thread history to analyze thread performance for recent DB2 application, system, and utility threads. Near-term history (Classic) and thread history (Enhanced 3270UI) data are stored in VSAM data sets. Thread history in the Enhanced 3270UI is approximately equivalent to "thread-related information" in the Classic Interface's near-term history.

An additional distinction is that thread history is different from a snapshot history. Thread history refers to completed thread activities, while snapshot history includes activities currently in progress.

For information on how to set up thread history collection, see [Configuring thread history](#).

Several configuration parameters are required in order to enable thread history in the Enhanced 3270UI. See [Parameters updated for thread history](#) for information on thread history configuration parameters. In addition, the [HOLDDATA](#) information for this PTF contains installation instructions and post-configuration steps required to enable thread history.

Viewing thread history

This topic describes how to verify that the thread history data collector is running.

About this task

This task makes the following assumptions:

- Thread history data collector is running
- Tivoli Enterprise Monitoring Agent (TEMA) is running
- Tivoli Enterprise Monitoring Server (TEMS) is running
- Tivoli OMEGAMON Manager is running

Procedure

1. From the KOBSEVTS panel, which appears when you log in, select DB2. The active DB2 subsystems are displayed.
2. Enter R beside the name of the DB2 subsystem you want to verify. Press ENTER. If the thread history data collector is running for the DB2 subsystem you selected, the Thread History Selection panel (KDPHFIL1) is displayed. If the collector is not running, a message indicates that thread history is not active for DB2.

Note: The R option is also available from KOBSTART and KDPSTART.

Filtering thread history by time ranges (timespan)

You can filter your thread history by time range, to identify threads with performance problems.

About this task

This task assumes the thread history data collector is running.

Procedure

1. From the **KOBSEVTS** panel, which appears when you log in, select DB2. This displays the active DB2 subsystems.
2. Enter R next to the DB2 subsystem you want to verify.

- From the **Timespan** tab, you can specify that you want to select threads from a span of time counting back from the present, such as (1) five minutes or (2) 100 hours. Or you can specify (3) a historical time range, with a start and end date and time. For example, you can select threads for a time range starting at 09:32:01 on 05/15/2017 and ending at 11:32:01 on 05/19/17. Set the Minute(s), Hour(s), or Time Range specification you want to use, then enter 1, 2, or 3 to the left, where 1 is entered in this example:

```

Timespan
KDPHFIL1      Thread History Timespan Selection
Select an action and then press ENTER

 1  1. M Historical Last 005 Minute(s)
    2. H Historical Last 040 Hour(s)
    3. T Historical Time Range
      Time      Date
Start 14:21:51 02/20/2018 (HH:MM:SS MM/DD/YYYY)
End   14:26:51 02/20/2018 (HH:MM:SS MM/DD/YYYY)

                        OK  Clear  Cancel

```

- Select **OK**. The thread history summary is displayed.

Filtering thread history by event counts and times

You can filter your thread history by event counts and times, to identify threads with performance problems.

About this task

This task assumes the thread history data collector is running.

Procedure

- From the KOBSEVTS panel, which appears when you log in, select DB2. This displays the active DB2 subsystems.
- Enter R next to the DB2 subsystem you want to verify.
- Select the **Counts/Times** tab. From this tab, you can specify that you want to select threads based on a range of system usage counts and CPU and database elapsed times. The supported operators are EQ (Equal), NE (Not Equal), LT (Less Than), LE (Less Equal), GT (Greater Than), GE (Greater Equal).
- When you have specified the counts and times you want to monitor, select **OK**. The thread history summary is displayed.

Filtering thread history by thread IDs

You can filter your thread history by thread IDs, to identify threads with performance problems.

About this task

This task assumes the thread history data collector is running.

Procedure

- From the **KOBSEVTS** panel, which appears when you log in, select DB2. This displays the active DB2 subsystems.
- Enter R next to the DB2 subsystem you want to use.
- From the **Thread ID** tab, you can select threads by ID, using criteria such as Plan Name, Auth ID, Connect, Con Type, Correlation ID, CICS TX, and IMS PSB. Note that Correlation ID is case sensitive. You can use the EQ ("equal") or NE ("not equal") operators to specify that you want

to see results that match, or results that do not match, the string you enter. The question mark (?) wildcard can be used to represent one character in a string. For example, you might specify TS12?4 to see threads with Auth IDs such as TS1234 or TS1244.

The asterisk (*) wildcard can be used to specify that you want to see any string. For example, you might specify OMPE* to see threads with Auth IDs such as OMPEADMIN or OMPETEST. When you use the asterisk wildcard, any characters you enter after the asterisk will be ignored. For example, OMPE*TEST would be treated the same as OMPE*. You cannot use the asterisk at the beginning of a string, for example *ABC. This would be treated as just a wildcard, with the ABC being ignored.

4. When you have specified the selection criteria you want to use, select **OK**. The thread history summary is displayed.

Filtering thread history by end user

You can filter your thread history by end user, workstation, transaction, role, trusted context, or accounting string, from the End User tab.

About this task

This task assumes the thread history data collector is running.

Procedure

1. From the **KOBSEVTS** panel, which appears when you log in, select DB2. This displays the active DB2 subsystems.
2. From **KOBSTART** or **KDPSTART**, enter R next to the DB2 subsystem you want to use.
3. Select the End User tab. From this tab, you can specify that you want to select threads based on any of several case sensitive criteria:
 - End User ID (up to 56 bytes)
 - Workstation name (up to 56 bytes)
 - Transaction Name (up to 56 bytes)
 - Role Name (up to 56 bytes if running in a trusted context)
 - Trusted Context (up to 56 bytes if running in a trusted context)
 - Accounting String: up to 56 bytes for the agent. For DSN type, it is the first 56 bytes of QMDAACCT. For JCC/SQL types, it is the first 56 bytes of QMDASUFEX. For other types, it is the first 56 bytes of AMDAASTR.

You can use the EQ ("equal") or NE ("not equal") operators to specify that you want to see results that match, or results that do not match, the string you enter. The question mark (?) wildcard can be used to represent one character in a string. For example, you might specify John?Smith to see threads with End User IDs such as JohnBSmith or JohnQSmith.

The asterisk (*) wildcard can be used to specify that you want to see any string. For example, you might specify John* to see threads with End User IDs such as JohnSmith or JohnJones. When you use the asterisk wildcard, any characters you enter after the asterisk will be ignored. For example, John*Smith would be treated the same as John*.

4. When you have specified the selection criteria you want to use, select **OK**. The thread history summary is displayed.

Viewing summary of all selected history threads

You can view a list of threads that meet your selection criteria.

About this task

This task assumes the thread history collector is running and you have identified one or more selection criteria you want to use to identify current or recent threads that may have performance problems.

For information on how to specify the criteria, see [Using thread history](#).

Once you have specified the criteria, the thread summary is displayed. The summary shows columns of information that identify the workstation, transaction, user, usage, and other characteristics you can use to determine which threads need attention to improve system performance.

Viewing thread history detail accounting

The thread history accounting detail helps you diagnose performance problems.

About this task

This task assumes the thread history collector is running and you have identified one or more selection criteria you want to use to identify current or recent threads that may have performance problems.

For information on how to specify the criteria, see [Using thread history](#).

Procedure

1. In the Thread History Summary, select the thread you want accounting detail on, by typing S next to it and pressing ENTER. The **DB2 Thread History Detail Accounting** panel is displayed.
2. The Accounting (Acct) and Class3 tabs present information about the thread, which you can use to diagnose performance problems.

Viewing thread history wait times

The Class 3 Wait Times information helps you diagnose performance problems.

About this task

This task assumes the thread history collector is running and you have identified one or more selection criteria you want to use to identify current or recent threads that may have performance problems.

For information on how to specify the criteria, see [Using thread history](#).

Procedure

1. From the **Thread History Summary**, select the thread you want accounting detail on, by entering W next to it and pressing ENTER. The **DB2 Thread History Detail Wait Times** panel is displayed.
2. Examine the information in the Class 3 tab to diagnose performance problems.

Configuring thread history

Several parameters are required to configure PARMGEN.

About this task

For information about PARMGEN, see the [Implementation scenarios](#) in the IBM Documentation.

Procedure

1. Log into PARMGEN.
2. Use the instructions in the "Customizing the configuration profiles" step in the implementation scenario to edit the LPAR RTE configuration profile in the RTE's %RTE_HILEV%.%RTE_NAME% dataset and enable the following thread history parameters:
 - Verify that KD2_PFn_HIS_START is set to Y.
 - Set KD2_PFn_HIS_STORE to the value that includes THVSAM. If other options (for example, VSAM, SEQ) are included, make sure to set the dependent parameters such as KD2_PFn_HIS_LOGn.
3. Set the following parameters to YES:
 - KD2_PFn_THRDHIS_LOG_NUM
 - KD2_PFn_THRDHIS_DYN_SQL
 - KD2_PFn_THRDHIS_LOCK_CNTN
 - KD2_PFn_THRDHIS_LOCK_SUSP
 - KD2_PFn_THRDHIS_SCAN_SUMM
 - KD2_PFn_THRDHIS_SORT_SUMM

Note: These parameters can be configured in PARMGEN, but they are not yet implemented for use with thread history in the Enhanced 3270UI.
4. Run the PARMGEN \$PARSE and SUBMIT steps. The jobs that need to run will depend on your SMP/E maintenance and upgrade scenario. For example, you might just need to run the KCIJPW2R job, or you might need to run allocation jobs such as ALLOCDS, TCRV&dbid, and/or HCRV&dbid. Consult the IBM Documentation page on [SMP/E maintenance and upgrade scenarios](#).
5. Verify that the COPT&dbid file is generated correctly. Check that the THRD parameters are set according to the values you set in KD2_PFn_THRDHIS_* in PARMGEN:

```
THRDLOG(7)
THRDDATASET(D010MPE.VTS5815.DBA9.RKTH*)
THRDSQL(YES)
THRDCONT(YES)
THRDSUSP(YES)
THRDSCAN(YES)
THRDSORT(YES)
```

6. Verify that all data sets mentioned in COPT&dbid member have been generated.

Thread history parameters

New PARMGEN parameters have been added, and existing parameters have new defaults or have been updated, for use with thread history. See the *Parameter Reference* for further information.

Setting new PARMGEN parameters

About this task

You can change the new PARMGEN parameters, then refresh the profile so your new settings take effect. Follow these steps to make changes:

Procedure

1. Log into PARMGEN.
2. Create a new runtime environment.
3. Check the profile to make sure these parameters are set to their default values, as indicated:

```
KD2_PFn_HIS_VSAM_SU = MB
```

```
KD2_PFn_HIS_VSAM_MB = 900
KD2_PFn_HIS_ACCTG_CLASS = 1
KD2_PFn_THRDHIS_DYN_SQL = N
KD2_PF_HIS_LOCK_CNTN = N
```

4. Verify that KD2_PFn_HIS_START is set to Y.
5. Run the PARMGEN \$PARSE and SUBMIT steps. Note that the SUBMIT step may fail if there is insufficient free space. SUBMIT will try to allocate VSAM data sets of 900 MB each.
6. Verify that all VSAM data sets mentioned in the COPTxxxx member are generated and that they have the length you specified. If the SUBMIT job failed, verify that the **.WKD2SAM (ALLOCD) member, which is used for dataset allocation, has 900 MB.

Saving disk space if thread history is not in use

If you don't need thread history, there are several ways you can save disk resources by disabling collection and storage of unnecessary data.

About this task

You can disable near term history data collection, sequential data collection, or Enhanced 3270UI thread history collection to save disk space.

By default, the thread history parameter (KD2_PFn_HIS_START) is set to N. In such a case, the WRITEOPTION parameter is set to NONE and no data sets are allocated. If you change KD2_PFn_HIS_START to Y, the WRITEOPTION parameter is set to VSAM, SEQ, THVSAM, or any combination of these, based on the value of the KD2_PFn_HIS_STORE parameter. Corresponding data sets will be allocated as well.

Note: These space-saving steps will work only for new runtime environments (RTEs), as PARMGEN does not delete any thread history data sets allocated earlier.

If you are a new PARMGEN user, see [Implementation scenarios](#) in the OMEGAMON shared publications. This will explain how to use PARMGEN to configure OMEGAMON for DB2. The steps that follow assume that you have some knowledge of PARMGEN.

Procedure

1. Log into PARMGEN.
2. Create a new runtime environment (RTE).
3. Set the KD2_PFn_HIS_STORE parameter to, for example, THVSAM.
4. Set the KD2_PFn_HIS_START parameter to Y.
5. Update dependent parameters: data set number, since you selected the THVSAM option.
6. Run the \$PARSE and SUBMIT steps in PARMGEN. The jobs that need to be run will depend on your SMP/E maintenance and upgrade scenario. For example, you may just need to run the KCIJPW2R job, or you may need to run allocation jobs such as ALLOCD, *TCRV&dbid*, and *HCRV&dbid*. Consult the IBM Documentation topic [SMP/E maintenance and upgrade scenarios](#) for more information.
7. Verify that the COPT&dbid file has been generated correctly.
8. Verify that all data sets mentioned in the COPT&dbid member have been generated.

Example of thread history parameters

This code sample shows the thread history parameters fully configured.

Thread history parameters

```
* *****
*
* OMEGAMON for DB2 PE Thread history data collector options for
* Classic & OMEGAMON enhanced 3270 user interface (TOM) thread history
* Notes:
* 1. OMEGAMON enhanced 3270UI thread history applies to V5.3.0 and
*   higher versions only.
*   Your OMEGAMON for DB2 PE/PM version installed is:
*   - FMID HKDB530
* 2. COPTDBA9 NTH collector options only apply if the NTH enablement
*   flag is set (KD2_PFn_HIS_START = "Y")
*   Your NTH enablement flag is set to:
*   - KD2_PFn_HIS_START = "Y"
* *****
*
DB2SYS(DBA9)
*
* For both OMEGAMON enhanced 3270UI and Classic NTH options:
* Note: WRITEOPTION(VSAM,SEQ,THVSAM) options (or a variation of any of
*   these NTH storage options) are generated based on your
*   KD2_PFn_HIS_STORE setting. If KD2_PFn_HIS_START
*   = "N" (NTH collection is not enabled), WRITEOPTION defaults to
*   WRITEOPTION(NONE)
WRITEOPTION(VSAM,SEQ,THVSAM)
*
* For OMEGAMON Enhanced 3270UI thread history options:
* THRD* parameters are applicable to V5.3.0 and higher versions.
* Your OMEGAMON for DB2 PE/PM on z/OS version installed is:
* - FMID HKDB530
* *****
THRDL0G(7)
THRDDATASET(
  D010MPE.VTS5815.DBA9.RKTH*
)
THRDSQL(YES)
THRDCONT(YES)
THRDSUSP(YES)
THRDSKAN(YES)
THRDSORT(YES)
*
* For both OMEGAMON enhanced 3270UI and Classic NTH options:
ACCTG(1 2 3 7 8 10)
*AUTH()
*PLAN()
*CONN()
*C0RR()
*ORIGAUTH()
*
* For Classic NTH options:
BUFSIZE(2048)
IFIREADTIME(010000)
INTERVAL(15)
NTAINTERVAL(5)
SUSPCOLL(YES)
POSTPCT(70)
*
STATISTICS(YES)
SCAN(NO)
SORT(NO)
*
DYNAMICSQL(NO)
LOCKCONT(NO)
LOCKSUSP(NO)
NEGSQL(NO)
*
* For Classic NTH options:
H2DATASET(
  D010MPE.VTS5815.QA530.DBA9.RKD2VS01
  D010MPE.VTS5815.QA530.DBA9.RKD2VS02
  D010MPE.VTS5815.QA530.DBA9.RKD2VS03
  D010MPE.VTS5815.QA530.DBA9.RKD2VS04
  D010MPE.VTS5815.QA530.DBA9.RKD2VS05
```

```

D010MPE.VTS5815.QA530.DBA9.RKD2VS06
D010MPE.VTS5815.QA530.DBA9.RKD2VS07
* *****
* MEMBER: KD2$PCOP
* Purpose:
*   WCONFIG(KD2$PCOP) to identify additional H2DATASET()
*   in WKD2PAR(COPT&dbid) OMEGAMON for DB2 Classic NTH history.
* Instructions:
*   1. Add your additional H2DATASET() VSAM entries
*      D010MPE.VTS5815.QA530.DBA9.RKD2VSnn
*      (where nn = 08..60)
*      if you need more than 7 VSAMs as specified in the PARMGEN LPAR
*      RTE WCONFIG(QA530) profile's "KD2_PF01_HIS_LOGn" parameter.
*      Note: Do not modify "DBA9" as this imbed will be used for each
*            DB2-specific COPT&dbid NTH collector options member.
*
*      WCONFIG(KD2$PCOP) is imbedded in the WKD2PRF(COPT&dbid) member
*      by $PARSE* "Create runtime members and job" (via spawned job
*      KD2JPCR8 job or KD2JPUPC job or standalone xKD2PRF(CRTDB2M*) job)
*      Placeholder examples have been provided for modeling. Uncomment
*      out the parameter and customize accordingly.
*   2. To allocate the additional RKD2VSnn VSAMs, use the tailored
*      HCRV&dbid standalone RKD2VSnn allocation job in the
*      RTE's RKD2SAM dataset.
* *****
* USER SECTION: IMBED FOR MEMBER WKD2PRF(COPT&dbid)
* *****
* ----- BEGIN - USER SECTION: OVERRIDE ----- *
*D010MPE.VTS5815.QA530.DBA9.RKD2VS08
*D010MPE.VTS5815.QA530.DBA9.RKD2VS60
* ----- END - USER SECTION: OVERRIDE ----- *
)
SEQDATASET(
  D010MPE.VTS5815.QA530.TESTS(+1)
)
SPACE(CYL,10,2)

```

Adding thread history data sets

This topic discusses thread history datasets in OMEGAMON for Db2 on z/OS Performance Expert (OMPE) and explains how you can increase the number of datasets. The key is that you must restart the OMPE collector in order for new datasets to be recognized.

When you run OMPE with system substitution variables, a KCIPARSE step will run the next time OMPE starts. If you make changes to the permanent RKD2PAR file, the changes are not picked up until the next time KCIPARSE is run, which will happen when you start the OMPE collector.

The KCIPARSE step creates temporary files that are copies of the runtime files, but with substitutions made. The RKD2PAR file located where the COPT members are is copied to a temporary dataset. OMPE then runs from that temporary file; for example:

```

//KAND2PU DD DISP=SHR,
//DSN=&USERD2PU
//TMPD2PU DD DISP=(,PASS),DSN=&&TMPD2PU,DSNTYPE=(LIBRARY,1),
//UNIT=SYSDA,SPACE=(CYL,(5,5,440)),
//DCB=(RECFM=FB,LRECL=80,BLKSIZE=8880)

```

These startup messages show the RKD2PAR file as a temporary file:

```

K02Z056I OM02 V540 01-RKANPAR VOL=WKP100 DSN=SYS18283.T192035.RA000.OMPEPK3S.TMPPARU.H04
K02Z056I OM02 V540 02-RKANPAR VOL=WKP104 DSN=SYS18283.T192035.RA000.OMPEPK3S.TMPD2PU.H04

```

If you change the permanent RKD2PAR file, the change is not recognized until the next time KCIPARSE is run, when OMPE starts.

The only way to avoid this behavior is not to perform system variable substitution for the RKD2PAR dataset. In the OMPE Startup JCL, the following DSN names would have to be changed to the original names (not the temporary names):

```

//RKANPAR DD DISP=(OLD,PASS),
//DSN=*.KCIPARSE.TMPPARU

```

```
//DD DISP=(OLD,PASS),
//DSN=*.KCIPARSE.TMPD2PU
```

Accessing information about buffer pool performance

You can review buffer pool information (such as getpages and buffer pool hit ratios), to evaluate how well a thread is performing and to determine if excessive I/O is being consumed for a thread.

About this task

Note: You can access information about buffer pool performance from either Db2 Active Threads or Thread History.

Procedure

1. To access information about buffer pool performance from Db2 Active Threads:
 - a) From the OMEGAMON main menu, select the **DB2** tab (KOBSDB2).
 - b) In the entry field next to the appropriate Db2 subsystem, type T to access **Db2 Active Threads** panel (KDPTH52).
 - c) In the entry field next to the appropriate active thread:
 - Type B and press enter to access the **Db2 Thread Detail Buffer Pool** panel (KDPTHDBP). In the **Buffer Pools** section, type S next to the buffer pool of interest to access the **DB2 Thread Detail Buffer Pool** panel (KDPTHDBD).
 - Type G and press enter to access the **Db2 Thread Detail Group Buffer Pool** panel (KDPTHGBP). In the **Group Buffer Pools** section, type S next to the buffer pool of interest to access the **DB2 Thread Detail Group Buffer Pool** panel (KDPTHGBD).
2. To access information about buffer pool performance from Thread History:
 - a) From the OMEGAMON main menu, select the **DB2** tab (KOBSDB2).
 - b) In the entry field next to the appropriate DB2 subsystem, type R.
 - c) On the **Thread History Timespan Selection** panel (KDPHFIL1), specify the appropriate selection criteria and click **OK**.
 - d) On the **Thread History Summary** panel (KDPHISTL) panel:
 - Type B and press enter to access the **DB2 Thread History Detail Buffer Pools > BP** tab (KDPHBP). In the **Buffer Pools** section, type S next to the buffer pool of interest to access the **DB2 Thread History Detail Buffer Pool** panel (KDPHBPD).
 - Type G and press enter to access the **Db2 Thread History Detail Buffer Pools > GBP** tab (KDPHGBP). In the **Group Buffer Pools** section, type S next to the buffer pool of interest to access the **DB2 Thread History Detail Buffer Pool** panel (KDPHGBPD).

Chapter 6. Using Anomaly Detection

In performance monitoring, you can place thresholds on metrics to determine if a Db2 thread is using an excessive amount of resources. For example, you might set up thresholds on metrics such as CPU time, Elapsed Time, and Get Pages. The problem with setting such thresholds though is how do you determine what is normal and what is truly an error that needs attention.

For a CICS transaction to use less than 5 seconds of Db2 Elapsed time and setting a threshold to detect larger values makes sense. But what about a batch program? Its CPU Time, Elapsed Time and Get Pages will probably be much larger. You want to trigger an exception if a specific CICS transaction is running too long, but you do not want an exception condition to trigger for a batch program that is expected to run for a long time.

This is where machine learning and artificial intelligence for Anomaly Detection is valuable. Machine learning and artificial intelligence mean that OMEGAMON for Db2 Performance Expert has an initial learning period where metrics of thread executions grouped by specific Thread Identity fields are recorded.

Once the initial learning period is complete then Db2 threads that match the execution group are measured against previously learned metrics to look for anomalies. An anomaly is a thread that is outside the learned range by greater than the tolerance value. Learning continues if the value is within a reasonable range based on the discard tolerance value.

Starting Anomaly Detection

After setting the required parameters for Anomaly Detection the persistent data store (PDS) collector for the anomalies attribute group must be started in the Enhanced 3270 UI.

Procedure

1. From the Enhanced 3270 UI, select **View > History Configuration**.
2. Select **OMEGAMON XE for DB2 PE and PM on z/OS** and scroll down to **DB2 Anomaly**.
3. Configure the Historical Collection for Db2 Anomaly.
 - a) On the **General** tab, specify a **Collection Name** and select the appropriate **Interval**.
 - b) On the **Distribution** tab, set the appropriate **distribution**.
 - c) Click the **General** tab.
 - d) Click **OK**.

The following message is displayed: The collection was successfully created and distributed.

Viewing anomalies

When Anomaly Detection starts, it begins its learning phase. If for example, we have configured to use correlation ID for grouping, 100 occurrences of a CICS transaction (based on correlation id) would establish the average CPU, Elapsed and Get Page for that transaction. For example, 3 seconds average and 2 second standard deviation for elapsed time, .000005 average for CPU seconds and 100 average for get pages. If after the first 100 occurrences, if a transaction had an elapsed time of 14 seconds, this is more than 5 standard deviation away from the mean (5 being the tolerance), it would be reported as an elapsed time Anomaly.

Procedure

1. From the OMEGAMON Enhanced 3270 User Interface, you can set the range of historical data you want to see (the default is two hours). Selecting **Edit > Preferences** and select the **History** tab where you can then change the range of data displayed for history.
2. From the Db2 main menu, select **A** to view any anomalies within the range selected.
3. Select **S** to show more details for the thread that triggered an anomaly.

Using machine learning and artificial intelligence allows us to set smart thresholds based on what we have learned from experience. This reduces the number of false-positives where threads are flagged for exceeding a threshold but are not truly an error. In this way, we can concentrate performance tuning efforts to the specific threads that are causing performance problems.

Chapter 7. Understanding icons and PF keys

Reference of PF keys and icons.

Icons

The enhanced 3270UI displays many different "icons" that perform various functions. Icons are typically displayed in reverse video white, which indicates an action occurs when you place your cursor on the icon and press Enter (or double-click if your emulator is configured to do so).

Icon	Name	Description
v	Collapse	Displays the header of the subpanel and no data
>	Expand	Displays the entire subpanel with data
_	Minimize	Places the subpanel into the workspace footer
	Maximize	Causes the subpanel to occupy the full screen
	Normalize	Causes the subpanel to return from maximum size to normal size
	Close	Removes the subpanel from the workspace
←	Left arrow	Scrolls data to the left
→	Right arrow	Scrolls data to the right
↑	Up arrow	Scrolls data up
↓	Down arrow	Scrolls data down
▼▲	Sort	Denotes a column is sortable ascending/descending
◦	Static	Denotes a column is laterally non-scrollable

Icon	Name	Description
MORE	More	Indicates that more subpanels exist above or below.
CANCEL	Cancel	Exits current workspace/popup without changes.
OK	OK	Confirms a change, effective for current session only.
SAVE	Save	Saves a change, persisted across session logoff/logon.
EXIT	Exit	Confirms you would like to proceed to the next panel.

Icon	Name	Description
«	Open drawer	Reveals the Application Navigation Drawer, which displays more icons that you can use to navigate or display administrative workspaces
»	Close drawer	Closes the Application Navigation Drawer

Table 4. Application navigation icons (continued)

Icon	Name	Description
HUB	Hub	Goes to the Hub Connectivity Administration workspace
RTE	RTE	Goes to the Runtime Environment workspace
NAV	Navigate	Opens a product navigation area in the footer area. The icons that you see represent OMEGAMON products that are installed and available to be invoked.

PF keys

The following Standard PF keys are defined.

Note: PF keys are not customizable.

Table 5. PF keys

PF key	Description
PF1	Provides help for column headings.
PF2	Reserved for future use.
PF3	Returns you to a previous workspace, or exits a popup.
PF4	Displays a list of filters for a workspace, if defined.
PF5	Find string in a PDS member.
PF6	Reserved for future use.
PF7	Scrolls a workspace or subpanel up.
PF8	Scrolls a workspace or subpanel down.
PF9	Displays the Product Navigation Array.
PF10	Scrolls a workspace or subpanel left.
PF11	Scrolls a workspace or subpanel right.
PF12	Retrieves previously entered command(s).

Associating a mouse click with the Enter key

If your emulator supports the option to associate a mouse click with the Enter key, you can use this feature to "double-click" where you normally "click and press Enter." Consult your emulator's documentation for details about how to enable this feature.

Chapter 8. Enabling historical data collection

The enhanced 3270UI is designed for investigation of current problems or those that have occurred in the recent past.

Therefore, near-term history data can be displayed in the enhanced 3270UI workspaces. The near-term history supports Db2 statistics, DSNZPARM, Db2 critical messages, Db2 connect server and object analysis.

Each workspace consists of one or multiple attribute groups. The history collection for the corresponding attribute groups must be started in order to see the history data in a workspace. Attribute groups that you need to enable historical collection for the workspaces are shown below.

Table 6. Workspace and attribute group cross reference for history collection for Db2 Subsystems.

For example, if you want to view the Group Buffer Pools history, you must start history collection for attribute group Db2 Group Coupling Facility, and DSG_GBP_Pool. Later, if you also want to see Global Buffer Pools history, then you start history collection for attribute group DSG_GBP_CF_Status.

Workspace	Attribute group
Db2 Main Screen All Active Db2 Data Sharing Groups	Db2 Group Coupling Facility
Group Buffer Pools	DSG_GBP_Pool
Global Buffer Pools	DSG_GBP_CF_Status
Coupling Facility Details	Db2 Group Coupling Facility
Group Object Analysis	Group Object Analysis Group Object Spacename
Group Object Analysis Volume	GOA Volume Summary GOA Volume Database Summary
Group Object Analysis Database Activity	Group Object Activity Summary
DSG DSNZPARMs	DSG DSNZPARMs
DSG SQL Counts	DSG SQL Count

Table 7. Workspace and attribute group cross reference for history collection for Db2 Subsystems.

For example, if you want to see Subsystem Management history, you must start history collection for attribute group **Db2 System Status**, **Db2 SRM Subsystem Statistics** and **Db2 SRM Subsystem**. Later if you also want to see Group Buffer Pools history, then you start history collection for attribute group **Db2 GBP Pool**.

Workspace	Attribute group
Enterprise summary All Active Db2 Subsystems Db2 Main Screen All Active Db2 Subsystems	Db2 System Status

Table 7. Workspace and attribute group cross reference for history collection for Db2 Subsystems.

For example, if you want to see Subsystem Management history, you must start history collection for attribute group **Db2 System Status**, **Db2 SRM Subsystem Statistics** and **Db2 SRM Subsystem**. Later if you also want to see Group Buffer Pools history, then you start history collection for attribute group **Db2 GBP Pool**.

(continued)

Workspace	Attribute group
Key Performance Indicators	Db2 System Status DB2_Memory DB2_Memory_DBM1_DIST
Subsystem Management	Db2 SRM Subsystem Statistics Db2 SRM Subsystem
Log Management	LOG Stats (Db2 Version 11) Db2 SRM Log Statistics Db2 SRM Log Manager
EDM Pool	EDM Pool Statistics (Db2 Version 11) EDM STATS (Db2 Version 11) Db2 SRM EDM Statistics EDM POOL
Buffer Pools	Db2 BP Statistics (Db2 v12) Db2 BP Attributes (Db2 v12) Db2 SRM BPM Db2 SRM BPD
Group Buffer Pools	Db2 GBP Pool
Global Buffer Pools	Db2 GBP CF Stats
Db2 Connect Server	Db2 CONNECT TASKLIST Db2 CONNECT PACKAGE Db2 CONNECT SERVER
Storage Consumption	Db2 Memory DBM1 DIST Db2 Memory MVS™ Storage
DSNZPARAMs	Db2 Parameters
System SQL Counts	Stat SQL Count SQL COUNTER
z/OS System Statistics	ZOS System Statistics
Accelerators	Accelerator Statistics
Lock Statistics	Lock Statistics
Db2 Message	Db2 Message
Db2 Anomaly	Db2 Anomaly
Db2 Interval Statistics	Db2 Interval Statistics

Chapter 9. Enabling interval statistics in Snapshot History

Follow these steps to enable interval statistics in Snapshot History.

Procedure

1. Use your preferred configuration method to specify the Snapshot History parameters.

Parameter	Set to	Description
KD2_PFO1_SH_D2SHKHST	Y	Enables Snapshot History
KD2_PFO1_SH_D2SHSTAT	Y	Enables Snapshot History Db2 system statistics collection
KD2_PFO1_SH_D2SHSTAI	3600 (recommended) or a value in the range 1 - 86400	Defines the Db2 system statistics collection interval in seconds.
KD2_PFO1_SH_D2SHSPAR	Y	Enables Snapshot History Db2 system parameters collection
KD2_PFO1_SH_D2SHSPAI	3600 (recommended) or a value in the range 1 - 86400	Defines the Db2 system parameters collection interval in seconds

2. View member RKD2PAR member OMPESSID (where SSID is the Db2 subsystem name) to verify your parameter settings.

Snapshot History is generated based on the collection intervals you specify. If you specify 3600, for example, the first time Snapshot History is generated will be 1 hour after the OMEGAMON Collector starts.

Chapter 10. Resetting interval statistics

Follow these steps to reset interval statistics.

Procedure

1. In the **Situation Editor**, specify N to create a new situation.
2. Specify a file name and description.
3. In the **Table Name** list, select **DP Inital Statistics**.
4. In the **Column Name** list, select **Hour** and specify a value in the range 00-23.
5. On the **Distribution** tab, select the Db2 subsystems for which the situation should be triggered.

Chapter 11. Workspace names and descriptions

These workspaces that display in the OMEGAMON Enhanced 3270 User Interface.

<i>Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions</i>		
Workspace Name	Panel Identification (ID)	Workspace Content
Accelerator Selection	KDPACCN	Accelerator statistics for all configured accelerators.
Accelerator Statistics for a Selected Accelerator	KDPACC41	Accelerator statistics for a selected accelerator.
Accelerator Statistics for a Selected Db2	KDPACC42	Accelerator statistics for a selected Db2.
Active Threads	KDPTH52	A global view of thread activity for a specific Db2 subsystem. It provides key performance data such as CPU rate, in-Db2 time, wait time, Db2 status, getpage, commits and updates that help you to identify any potential problem.
Aggregated Accounting Statistics	KDPAGAC	Aggregated accounting statistics listed by connection type.
All Active Db2 Subsystems	KOBSTART	A list of the Db2 subsystems that are active in your enterprise system. It shows the general state and health of the active Db2 subsystems. This is the starting point for troubleshooting.
Buffer Pool Detail	KDPBPTL	The size and the usage of an individual Db2 buffer pool.
Buffer Pool Details	KDPBP52	The size and the usage of an individual Db2 buffer pool.
Buffer Pools	KDPBP52	A summary of the buffer pools that are configured and are in use for a Db2 subsystem. A drill down to buffer pool details is available.
Cancel Thread Results	KDPTCAN2	The results from the cancel thread command that was issued.
CICS	KDPTHCIS	Displays a CICS thread summary.
CICS RCT Summary for Region	KDPCICST	The CICS/Db2 Resource Control Table. This table shows the Db2 plan that is used for each CICS transaction.
CICS Threads	KDPCICTH	Provides an overview of Db2 thread activity that originate from connected CICS regions. It provides key performance data such as CPU rate, in-Db2 time, wait time, Db2 status, getpage, commits and updates that help you to spot any potential problem.
CICS Thread Summary	KDPCICT1	CICS threads summary for a target CICS region.
Common storage below and above the 2 GB bar	KDPSTC2A	The Common Storage workspace provides an overview of the common storage above and below the 2 GB bar.
Coupling Facility Connections	KDPXCFD	Connection status information for all connections to a coupling facility structure.
Critical Db2 Messages	KDPMMSGC	Displays messages that can help you identify problems with your Db2 system.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Critical Db2 Messages by Message ID	KDPMSGS	Critical Db2 messages sorted by message identification number.
Data Sharing Group Lock Conflicts	KDPGLKGN	The lock conflicts that exist in a data sharing group.
Data Sharing Thread Activity	KDPPTHRD	Provides a global view of thread activity for an entire data sharing group. With this information, you can identify all active application threads and track thread activity over a period of time. You can use the thread data to monitor critical application threads and to evaluate the thread elapsed times and the wait times for critical threads. You can also observe thread activity for threads within the same system, group, and member.
Data Sharing Thread Statistics	KDPPTHDS	Thread statistics for a specific application thread. If the application thread is a parallel thread, the table view displays thread statistics for all the associated parallel threads. With this information, you can investigate a thread that consumed excessive elapsed time.
Db2 All DSNZPARM	KDPZPARM	Parameters that are related to DSNZPARM.
Db2 Buffer Pools	KDPBPOOL	A list of active group buffer pools.
Db2 CICS Connections	KDPCICS	An overview of Db2 thread activity that is originating from connected CICS subsystems. Information about the CICS regions that are attached to Db2.
Db2 Connect/Gateway Statistics	KDPCONNS	Statistics about the selected Db2 Connect gateway including details about the number of agents and pooled agents, the connections that are waiting for the host to reply, and the connections that are waiting for the client to send a request.
Db2 Connect Performance	KDPCPERF	Displays the information obtained by running a sample SQL statement between the Db2 Connect gateway and the host database. It enables you to detect any bottlenecks.
Db2 Connect Server	KDPCONN	Key information about the active and the inactive Db2 Connect gateways.
Db2 Connect Tasks List	KDPCTASK	Statistics about the processes at the selected Db2 Connect gateway, for example, the CPU and the working set. Use the information to determine whether the Db2 Connect gateway is overloaded by Db2 Connect or any other allocation application.
Db2 DSNZPARM Active Log Parameters	KDPZLOG	Parameters that are related to the active log. These parameters are defined on the Db2 panel, DSNTIPL.
Db2 DSNZPARM Application Parameters	KDPZAPPL	Parameters that are related to applications. These parameters are defined on the Db2 panels DSNTIPF, DSNTIP4, and DSNTIP41.
Db2 DSNZPARM Archive Log Parameters	KDPZARC	Parameters that are related to log archiving. These parameters are defined on the Db2 panels DSNTIPA and DSNTIPH.
Db2 DSNZPARM Data Definition Control Parameters	KDPZDDCS	Parameters that are related to data. These parameters are defined on the Db2 panel DSNTIPZ.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Db2 DSNZPARM Data Parameters	KDPZDATA	Parameters that are related to data. These parameters are defined on the Db2 panels DSNTIPA2, DSNTIPO3, and DSNTIPM.
Db2 DSNZPARM Dataset and Database Parameters	KDPZDSN	Parameters that are related to data sets and databases. These parameters are defined on Db2 panels DSNTIP7, DSNTIP71, DSNTIP91, and DSNTIPS.
Db2 DSNZPARM Data Sharing Parameters	KDPZDSG	The parameters that are related to data sharing. These parameters are defined on the Db2 panel DSNTIPK.
Db2 DSNZPARM Default Buffer Pool Parameters	KDPZBP	Parameters that are related to the Default Buffer Pools. These parameters are defined on the Db2 panel DSNTIP1.
Db2 DSNZPARM IRLM Parameters	KDPZIRLM	Parameters that are related to IRLM. These parameters are defined on the Db2 panels DSNTIPI and DSNTIPJ.
Db2 DSNZPARM Operator Functions Parameters	KDPZCTL	Parameters that are related to operator functions. These parameters are defined on the Db2 panels DSNTIPO, DSNTIPP, DSNTIPP1, DSNTIPR and DSNTIP5.
Db2 DSNZPARM Other Parameters	KDPZOTH	Miscellaneous parameters that are defined on the Db2 panels DSN6SYSP, DSN6LOGP, DSN6ARVP, DSN6SPRM, DSN6FAC, and DSNHDECP.
Db2 DSNZPARM Performance and Optimization	KDPZPERF	Parameters that are related to performance and optimization. These parameters are defined on the Db2 panels DSNTIP8, DSNTIP81, and DSNTIP82.
Db2 DSNZPARM Storage and sizes	KDPZSTG	DSNZPARM parameters that are related to storage and sizes. These parameters are defined on the Db2 panels DSNTIPC and DSNTIPD.
Db2 DSNZPARM Stored Procedure	KDPZSP	DSNZPARM parameters that are related to Stored Procedures. These parameters are defined on the Db2 panel DSNTIPX.
Db2 DSNZPARM Thread Management	KDPZSYS	DSNZPARM parameters that are related to thread management. These parameters are defined on the Db2 panels DSNTIPE and DSNTIPE1.
Db2 DSNZPARM Trace	KDPZTRC	Parameters that are related to the trace. These parameters are defined on the Db2 panel, DSNTIPN.
Db2 DSNZPARM Utility	KDPZUTIL	DSNZPARM parameters that are related to utilities. These parameters are defined on Db2 the panels DSNTIP6, DSNTIP61, and DSNTIP62.
Db2 Dynamic SQL Cache Filter Options	KDPDSQLF	Filter options to manage the data returned from the Dynamic SQL cache especially when many rows are returned. The default filter option settings display the first 100 statements in descending order of the accumulated CPU time.
Db2 Dynamic SQL Cache Statement Statistics	KDPDSQLS	A summary of the contents of the Dynamic SQL cache so that you can determine their performance.
Db2 Environmental Descriptor Manager (EDM) Pool	KDPEDM2A	An overview of the Environmental Descriptor Manager (EDM) pool activity that is connected with Db2.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Db2 Environmental Descriptor Manager (EDM) Pool	KDPEDMA	An overview of the Environmental Descriptor Manager (EDM) pool activity that is connected with Db2. The layout of the workspace depends on the Db2 version that is installed. The panel KDPEDMA applies to Db2 10.
Db2 Environmental Descriptor Manager (EDM) Pool	KDPEDMB	An overview of the Environmental Descriptor Manager (EDM) pool activity that is connected with Db2. The layout of the workspace depends on the Db2 version that is installed. The panel KDPEDMB applies to Db2 11.
Db2 Global Buffer Pool Detail	KDPGBPDT	Details about a specific global buffer pool for a member of a data sharing group.
Db2 Global Buffer Pool Detail	KDPPGBPD	Group buffer pool detail for all members of a data sharing group.
Db2 Global Buffer Pools Summary	KDPPGBPO	The global buffer pools for all members of a data sharing group.
Db2 Group All DSNZPARM	KDPPZPRM	Parameters that are related to DSNZPARM.
Db2 Group Buffer Pool Detail Castout	KDPPGBPP	Prefetch information and castout information about a group buffer pool for all members of a data sharing group.
Db2 Group Buffer Pool P-Lock	KDPGBPLK	The P-Lock information for a group buffer pool.
Db2 Group Buffer Pool P-Lock	KDPPGBPL	The P-Lock information for a group buffer pool for all members of a data sharing group.
Db2 Group Buffer Pool Secondary Buffer Pools Group level	KDPPGBPC	The Db2 Group Buffer Pool secondary information for all members of a data sharing group.
Db2 Group Buffer Pool Statistics	KDPPGPLL	A summary of all group buffer pools for all members of a data sharing group.
Db2 Group Buffer Pool Sync and GBP write	KDPPGBPS	Sync reads, writes and the hit ratio of a group buffer pool for all members of a data sharing group.
Db2 Group DSNZPARM Active Log Parameters	KDPPZLOG	Parameters that are related to the active log. These parameters are defined on the Db2 panel, DSNTIPL.
Db2 Group DSNZPARM Application Parameters	KDPPZAPP	Parameters that are related to applications. These parameters are defined on the Db2 panels DSNTIPF, DSNTIP4, and DSNTIP41.
Db2 Group DSNZPARM Archive Log Parameters	KDPPZARC	Parameters that are related to log archiving. These parameters are defined on the Db2 panels DSNTIPA and DSNTIPH.
Db2 Group DSNZPARM Data Definition Control Parameters	KDPPZDDCS	Parameters that are related to data. These parameters are defined on the Db2 panel DSNTIPZ.
Db2 Group DSNZPARM Data Parameters	KDPPZDAT	Parameters that are related to data. These parameters are defined on the Db2 panels DSNTIPA2, DSNTIPO3, and DSNTIPM.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Db2 Group DSNZPARM Dataset and Database Parameters	KDPPZDSN	Parameters that are related to data sets and databases. These parameters are defined on Db2 panels DSNTIP7, DSNTIP71, DSNTIP91, and DSNTIPS.
Db2 Group DSNZPARM Data Sharing Parameters	KDPPZDSG	The parameters that are related to data sharing. These parameters are defined on the Db2 panel DSNTIPK.
Db2 Group DSNZPARM Default Buffer Pool Parameters	KDPPZBP	Parameters that are related to the Default Buffer Pools. These parameters are defined on the Db2 panel DSNTIP1.
Db2 Group DSNZPARM IRLM Parameters	KDPPZIRL	Parameters that are related to IRLM. These parameters are defined on the Db2 panels DSNTIPI and DSNTIPJ.
Db2 Group DSNZPARM Operator Functions Parameters	KDPPZCTL	Parameters that are related to operator functions. These parameters are defined on the Db2 panels DSNTIPO, DSNTIPP, DSNTIPP1, DSNTIPR and DSNTIP5.
Db2 Group DSNZPARM Other Parameters	KDPPZOTH	Miscellaneous parameters that are defined on the Db2 panels DSN6SYSP, DSN6LOGP, DSN6ARVP, DSN6SPRM, DSN6FAC, and DSNHDECP.
Db2 Group DSNZPARM parameters	KDPPZSYS	Displays information about DSNZPARM parameters that are related to thread management.
Db2 Group DSNZPARM Performance and Optimization	KDPPZPF	Parameters that are related to performance and optimization. These parameters are defined on the Db2 panels DSNTIP8, DSNTIP81, and DSNTIP82.
Db2 Group DSNZPARM Storage and sizes	KDPPZSTG	DSNZPARM parameters that are related to storage and sizes. These parameters are defined on the Db2 panels DSNTIPC and DSNTIPD.
Db2 Group DSNZPARM Stored Procedure	KDPPZSP	DSNZPARM parameters that are related to Stored Procedures. These parameters are defined on the Db2 panel DSNTIPX.
Db2 Group DSNZPARM Trace	KDPPZTRC	Parameters that are related to the trace. These parameters are defined on the Db2 panel, DSNTIPN.
Db2 Group DSNZPARM Utility	KDPPZUTL	DSNZPARM parameters that are related to utilities. These parameters are defined on Db2 the panels DSNTIP6, DSNTIP61, and DSNTIP62.
Db2 Group Object Analysis Database Spacename	KDPMGOAS	The table spaces within a database. With this information, you can do an analysis of a group object.
Db2 Group Object Analysis Thread Database	KDPMGOATD	Object Analysis database use by thread for a data sharing group.
Db2 Group Object Analysis Volume Thread	KDPMGVOL2	The thread activity by volume workspace.
Db2 Group SQL Counts Data Control Language (DCL)	KDPPSQL2	The system SQL counts for the Data Control Language (DCL) for each member of a data sharing group.
Db2 Group SQL Counts Data Definition Language (DDL)	KDPPSQL3	The system SQL counts for the Data Definition Language (DDL) for each member of a data sharing group.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Db2 Group SQL Counts Data Manipulation Language (DML)	KDPPSQL1	Displays the system SQL counts for a thread for each member of a data sharing group.
Db2 Group SQL Counts for Concentrate Literals	KDPPSQL8	The system SQL counts for Concentrate Literals for each member of a data sharing group.
Db2 Group SQL Counts for Prepares	KDPPSQL7	The system SQL counts for Prepares for each member of a data sharing group.
Db2 Group SQL Counts for Stored Procedures, User Defined Functions and Triggers	KDPPSQL6	The system SQL counts for Stored Procedures, User Defined Functions, and Triggers for each member of a data sharing group.
Db2 Group SQL Counts Miscellaneous	KDPPSQLE	The system miscellaneous SQL counts for each member of a data sharing group.
Db2 Group SQL Counts Query Parallelism	KDPPSQL5	The system SQL counts for query parallelism for each member of a data sharing group.
Db2 Group SQL Counts Record Identifier (RID) List Processing	KDPPSQL4	The system SQL counts for Record Identifier (RID) List Processing for each member of a data sharing group.
Db2 Group SQL Counts Row ID Access	KDPPSQLD	The system SQL counts for Row ID Access for each member of a data sharing group.
Db2 Group SQL Counts Use Committed	KDPPSQLA	The system SQL counts for Use Committed for each member of a data sharing group.
Db2 Group SQL Counts Workfiles	KDPPSQLB	The system SQL counts for workfiles for each member of a data sharing group.
Db2 Interval Statistics	KDPINTVS	Summary display of Interval Statistics for all DB2s
Db2 Main	KDPSTART	The active Data Sharing Groups and the active Db2 subsystems. From this workspace, you can drill down to any other screens.
Db2 SQL Counts Data Control Language (DCL)	KDPSQL2	The system SQL counts for Data Control Language (DCL) for a Db2 subsystem.
Db2 SQL Counts Data Definition Language (DDL)	KDPSQL3	The system SQL counts for Data Definition Language (DDL) for a Db2 subsystem.
Db2 SQL Counts Data Manipulation Language (DML)	KDPSQL1	The SQL counts for the Data Manipulation Language (DML) for a Db2 subsystem.
Db2 SQL Counts for Concentrate Literals	KDPSQL8	The system miscellaneous SQL counts for each member of a data sharing group.
Db2 SQL Counts for Prepares	KDPSQL7	The system SQL counts for Prepares for a Db2 subsystem.
Db2 SQL Counts for Stored Procedures, User Defined Functions and Triggers	KDPSQL6	The system SQL counts for Stored Procedures, User Defined Functions, and Triggers for a Db2 subsystem.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Db2 SQL Counts Miscellaneous	KDPSQLE	The system miscellaneous SQL counts for each member of a data sharing group.
Db2 SQL Counts Query Parallelism workspace	KDPSQL5	The system SQL counts for Query Parallelism for a Db2 subsystem.
Db2 SQL Counts Record Identifier (RID) List Processing	KDPSQL4	The system SQL counts for Record Identifier (RID) List Processing for a Db2 subsystem.
Db2 SQL Counts Row ID Access	KDPSQLD	The system SQL counts for Row ID access for a Db2 subsystem.
Db2 SQL Counts Use Committed	KDPSQLA	The system SQL counts for Use Committed for each member of a data sharing group.
Db2 SQL Counts Workfiles	KDPSQLB	The system SQL counts for workfiles for each member of a data sharing group.
Db2 Subsystem Interval Statistic	KDPINTVD	Detail display of Interval Statistics for specific Db2 subsystem
Db2 Thread Detail Locks Owned	KDPPLK	The locks and claims that are owned by a thread that is linked from the data sharing group Lock Conflicts workspace.
Distributed Thread Detail	KDPTHRDD	Information about the VTAM® APPC conversations and TCP/IP conversations of a distributed (DDF) thread.
Find DSNZPARM Parameters	KDPPZFND	Parameters that are related to DSNZPARM. With the information in this workspace, you can find Db2 parameters by field name or description for all members in a data sharing group.
Find DSNZPARM Parameters	KDPZFIND	Db2 parameters by field name or field description for a Db2 subsystem.
Global Buffer Pools	KDPPGPLL	A summary of all group buffer pools for all members of a data sharing group.
Global Buffer Pool Summary	KDPGBPOL	A summary of active group buffer pools for this member of the data sharing group.
Global Lock Statistics	KDPLOK3	A summary of all locking activity in a data sharing group.
Group Buffer Pool Prefetch Castout	KDPGBPPF	Prefetch information and castout information about a group buffer pool.
Group Buffer Pool Secondary GBP	KDPGBPSC	The Db2 Group Buffer Pool secondary information.
Group Buffer Pool Summary	KDPGPOOL	A list of active group buffer pools. A drill down for more details is also available.
Group Buffer Pool Sync and GBP write	KDPGBPSY	Sync reads, writes and the hit ratio of a group buffer pool.
Group Object Activity by Tablespace	KDPGOAT2	Information about the activity of a group object by table space. With this information, you can do a more detailed analysis of the activities for a Db2 table space.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Group Object Analysis Database Activity	KDPGOATS	A high-level analysis of getpage and I/O activity from a Db2 database perspective.
Group Object Analysis Spacename	KDPGSPAC	Provides information about the activity of Db2 databases and Db2 table spaces. With this information, you can do a more detailed analysis of the activities for a Db2 databases and Db2 table spaces.
Group Object Analysis Space Name	KDPSPAC	Provides information about the activity of Db2 databases and Db2 table spaces. With this information, you can do a more detailed analysis of the activities for a Db2 databases and Db2 table spaces.
Group Object Analysis Spacename Detail	KDPGSPAD	The Group Object Analysis table space detail workspace.
Group Object Analysis	KDPGOA	A global view of object allocation data for a specific data sharing group.
Group Object Volume Database	KDPGVDB	Displays information you can use to analyze I/O activity for a single volume in a Db2 database. Based on the information that this workspace provides, you can recommend changes, set up situations, and verify that your recommended changes improve system performance.
History Db2 Messages	KDPMSGH	Display historical Db2 messages that can help you diagnose performance problems in the past.
IMS Connections	KDPIMS	An overview of Db2 thread activity that is originating from connected IMS subsystems.
IMS Region Information	KDPIMSRG	Detailed status information for a specific IMS dependent region.
Key Performance Indicators	KDPKPI1	A summary of thread related Key Performance Indicators for a Db2 subsystem. It includes connections, transactions and locking Key Performance Indicators, which can help you quickly identify and resolve any performance issues.
Latch Counters	KDPLOK2	View latch statistics counters associate with a latch level.
Lock Conflicts	KDPLOCKS	An overview of the Db2 database lock conflicts.
Lock Manager Information	KDPLOK1	A view of current locking activity.
Locking Conflicts	KDPLKC2	Displays the lock conflicts that exist for a Db2 subsystem.
Log Manager	KDPLOGSB	An overview of the Db2 log manager active logging and archiving activity.
Log Manager	KDPLOGSM	An overview of the Db2 log manager active logging and archiving activity.
Log Manager	KDPLOGS9	An overview of the Db2 log manager active logging and archiving activity.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Miscellaneous Key Performance Indicators	KDPKPI3	Miscellaneous Key Performance Indicators for a Db2 subsystem. It includes monitoring, logging, stored procedures, user defined functions and query parallelism Key Performance Indicators, which can help you quickly identify and resolve any performance issues.
MVS Storage above 2 GB	KDPSTA2A	The MVS Storage Above 2 GB workspace provides an overview of MVS storage above the 2 GB bar. It shows information about storage allocation within the DBM1 and DIST address space.
Navigation Options Pop-up	KDPCPDBZ	
Package Statistics	KDPCPKG	Provides information about the size of the data exchanged between the Db2 Connect gateway and the host database and about the network time required. It enables you to measure the throughput between the host database and the Db2 Connect gateway and gives you a better idea of the database activity and network traffic at the application level.
Pools and Storage Key Performance Indicators	KDPKPI2	A summary of pool and storage related Key Performance Indicators for a Db2 subsystem. It includes Db2 pools, storage, buffer pools, sorting and group buffer pools Key Performance Indicators, which can help you quickly identify and resolve any performance issues.
Real and Auxiliary Storage	KDPSTU2A	The Real Aux workspace provides an overview of real and auxiliary storage allocation within DBM1 and DIST address space.
Secondary Latch Cont. Counters	KDPLOK4	View IRLM latch contention counters in Db2 statistics trace.
Shared Storage Above 2 GB	KDPSTS2A	The STMT workspace provides an overview of Db2 subsystem shared storage and shared variable storage above 2 GB.
SQL Text	KDPDYNTX	Displays the SQL text of statements in the Dynamic SQL cache.
SQL Text	KDPSTATX	Displays the SQL text of statement in the Static SQL cache.
Statistics	KDPDYNST	Displays the statistics for a statement in the Dynamic SQL cache.
Statistics	KDPSTAST	Displays the statistics for a statement in the Static SQL cache.
Storage Consumption	KDPSTO2A	The Db2 subsystem storage consumption.
Storage Consumption Common Storage Below and Above	KDPSTOCA	The Db2 subsystem storage consumption for common storage below and above 2 GB.
Storage Consumption DBM1 and MVS Storage Below 2 GB	KDPSTOAA	The Db2 subsystem storage consumption for DBM1 Storage and MVS Storage below 2 GB.
Storage Consumption DBM1 and MVS Storage Below 2 GB	KDPSTOA9	The Db2 subsystem storage consumption for DBM1 and MVS Storage below 2 GB.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Storage Consumption IRLM	KDPSTOIB	The IRLM workspace provides an overview of Db2 IRLM storage allocation including HWM and thresholds.
Storage Consumption LPAR	KDPSTOLA	The LPAR workspace provides an overview of MVS LPAR shared storage above 2 GB.
Storage Consumption Real and Auxiliary	KDPSTOM9	The Db2 subsystem consumption in MB for real and auxiliary storage.
Storage Consumption Real and Auxiliary Pages	KDPSTOUA	The Db2 subsystem storage consumption for real and auxiliary pages.
Storage Consumption Shared Storage Above 2GB	KDPSTOSA	The Db2 subsystem storage consumption for shared storage above 2 GB.
Storage Consumption Storage Below 2 GB	KDPSTORA	The Db2 subsystem storage consumption for storage below 2 GB.
Storage Consumption Subsystem Shared Storage Above 2GB	KDPSTOBA	The Db2 subsystem storage consumption for shared storage above 2 GB.
Subsystem Shared Storage Above 2 GB	KDPSTO2B	The Subsy Shr workspace displays subsystem shared storage above 2 GB including real storage and auxiliary storage.
System Resource Manager	KDPSUBSM	An overview of workload related information about the Db2 subsystem that you are monitoring.
System States	KDPKPI4	Key Db2 system and thread related performance data. This data includes thread, stored procedures, user defined functions, triggers, locks, and open datasets, which can help you quickly identify and resolve any performance issues.
The Cancel Thread Pop-up	KDPTCANC	Provides an option to cancel a thread.
Thread CICS Connection	KDPTHCIC	Display CICS connection information for a CICS thread.
Thread Detail Accelerator	KDPTHRDC	Information about accelerator metrics for an active thread.
Thread Detail Accounting Class 1 and 2	KDPTHDA2	The accounting classes 1 and 2 for a selected thread.
Thread Detail Accounting Class 1 and 2	KDPTHRDA	The accounting classes 1 and 2 for a selected thread.
Thread Detail Accounting Class 3 Wait Times	KDPTHRD3	The accounting class 3 wait times for a selected thread.
Thread Detail Distributed	KDPTHDD2	Information about the VTAM APPC conversations and TCP/IP conversations of a distributed (DDF) thread.
Thread Detail Long Names	KDPTHRDN	The long names (identification fields) that are associated with a specific thread.
Thread Detail SQL Text	KDPTSQLT	The SQL statement that a Db2 thread is currently executing.
Thread Enclave Detail	KDPTHDE2	Detailed information about the workload manager (WLM) enclave service periods.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
Thread Enclave Detail	KDPTHRDE	Detailed information about the workload manager (WLM) enclave service periods.
Thread Locks Owned	KDPTHRDL	Detailed information about the locks and the claims that are owned by an individual thread.
Thread SQL Counts Data Control Language (DCL)	KDPTSQL2	Displays the SQL counts for the Data Control Language (DCL) for a thread.
Thread SQL Counts Data Definition Language (DDL)	KDPTSQL3	The SQL counts for the Data Definition Language (DDL) for a thread.
Thread SQL Counts Data Manipulation Language (DML)	KDPTSQL1	The SQL counts for the Data Manipulation Language (DML) for a thread.
Thread SQL Counts for Concentrate Literals	KDPTSQL8	The SQL counts for Concentrate Literals for a thread.
Thread SQL Counts for Prepares	KDPTSQL7	The SQL counts for Prepares for a thread.
Thread SQL Counts for Stored Procedures, User Defined Functions and Triggers	KDPTSQL6	The SQL counts for Stored Procedures, User Defined Functions, and Triggers for a thread.
Thread SQL Counts Miscellaneous	KDPTSQLE	The miscellaneous SQL counts for a thread.
Thread SQL Counts Query Parallelism	KDPTSQL5	The SQL counts for query parallelism for a thread.
Thread SQL Counts Record Identifier (RID) List Processing	KDPTSQL4	The SQL counts for the Record Identifier (RID) List Processing for a thread.
Thread SQL Counts Row ID Access	KDPTSQLD	The SQL counts for row ID access for a thread.
Thread Summary	KDPTHRD	A global view of thread activity for a specific Db2 subsystem. You can sort differently by changing the Sort field.
T Thread Detail SQL Text (KDPPSQLT)	KDPSSQLS	A summary of the contents of the Static SQL cache so that you can determine their performance.
Utility Jobs	KDPUTILS	An overview of the active utilities. Workspace monitoring includes utilities that have not yet completed their run because of abnormal termination.
Volume Activity	KDPGVOL	An overview of the performance of the volumes that contain Db2 objects. . With this information, you can evaluate DASD performance by volume.
Volume Detail Activity	KDPGVOLD	A detail view of the performance of volumes that contain Db2 objects. With this information, you can evaluate DASD performance.
Volume Thread	KDPGVOLT	The volume activity by thread workspace.

Table 9. OMEGAMON Enhanced 3270 User Interface workspace names and descriptions (continued)

Workspace Name	Panel Identification (ID)	Workspace Content
z/OS System Statistics	KDPZOS	Overall CPU usage, paging real and virtual storage usage by Db2.

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