MainView for DBCTL User Guide

Supporting

Version 5.2 of MainView for DBCTL

December 2015
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Address  
BMC SOFTWARE INC  
2101 CITYWEST BLVD  
HOUSTON TX 77042-2827 USA

Telephone  
1 713 918 8800  
or  
1 713 918 8000

Fax  
1 800 841 2031

Outside United States and Canada

Telephone  
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- commands and options that you used
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**Chapter 22 View information for DBRC**

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**Chapter 23 View information about your BMC products for IMS**

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This book documents how to use the MainView for DBCTL product, including the Online Resource Analyzer, Workload Analyzer, Resource Monitor, Workload Monitor, and trace services.

For information about implementing, configuring, and customizing MainView for DBCTL, see the MainView for IMS and MainView for DBCTL Customization Guide.

For information about new features in the current release of the product, see the product's release notes, which are available on the Support Central website at http://www.bmc.com/support.

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**Tip**
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**Conventions**

This document uses the following special conventions:

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

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

- Menu sequences use a symbol to convey the sequence. For example, Actions => Create Test instructs you to choose the Create Test command from the Actions menu.
MainView for DBCTL overview

MainView for DBCTL provides single system image (SSI) views of resources and bottlenecks across single or multiple IMS regions and systems. MainView for DBCTL exploits IBM Parallel Sysplex technology and simplifies the management of IMS applications on traditional mainframes.

Benefits of using MainView for DBCTL

From a single user session, you can monitor and analyze the performance of one or more IMS subsystems.

You can transfer quickly to other MainView products and you can manage CICS and DB2 subsystems and the operating system from a single point of control.

MainView for DBCTL collects and organizes the information you want into the following categories of online views:

- Optimize system performance
- Solve real-time problems
- Manage IMS operations
The following figure provides an overview of how MainView for DBCTL works:

**Figure 1: MainView for DBCTL overview**

**IPSM overview**

- **EasyMenus**
  - EZIMSS
  - EZIFASTR
  - EZIMSR

- **IMS SSI**
  - EasyMenu

**DBCTL Performance**

- **DBCTL Plex Performance**
  - DBCPLXGR
  - DBCDTLGR

**Optimizing System Performance**

- **MONITORS**
  - TRACES
  - CORT
  - WORKFLOW views

**Solving Real-Time Problems**

- **IRLM**
  - PI
  - REGION
  - IMSSTAT views

**Managing IMS Operations**

- **DBACTVTY**
  - XREF
  - PROGRAM
  - DBAREA
  - FPAREAS views

The bottom of the diagram represents the view groups included in the MAIN view. You can access views in the groups by selecting options from an EZ menu or from an intermediate view (such as DBCDTLGR). You can also enter a view group name to access a list of the views in the group and then select a view from the list.
Optimize system performance

You can use MainView for DBCTL to discover performance and workload problems wherever they occur, across multiple operating systems and IMS subsystems.

With MainView for DBCTL, you can:

- Manage the progress, throughput, and response times of IMS workloads and transactions
- Examine workload throughput and capacity, as well as region/thread occupancy for IMS and IMSplex systems
- Identify workload bottlenecks and delays caused by resource and capacity constraints

The following types of views are provided to optimize system performance:

- **Workflow**
  These views allow system programmers to determine how much processing capacity is available and how much is being used at any given time. The views show any capacity shortages.

- **Transaction delay analysis**
  These views categorize transaction or workload delays and help you analyze individual resources that are causing delays. System programmers can use these views to ascertain which lock or DASD volume is causing delays and whether the delay affects a single IMS subsystem, a data-sharing group, the operating system, or a group of systems.

- **Unit of work elapsed time**
  These views show a picture of the life cycle of transactions running in IMS. System programmers can use the views to determine whether a transaction is being held up in scheduling, application processing, database access, or sync point processing.
The following figure shows how to use MainView for DBCTL to optimize system performance:

**Figure 2: Using MainView for DBCTL to optimize system performance**

To access a list of the views shown with asterisks above, enter VIEWS nnn*, where nnn represents the first three characters of the view names. You can then select a specific view from the list.
Solve real-time problems

Use MainView for DBCTL to solve real-time problems quickly.

MainView for DBCTL makes it easy to:

- Analyze IMS subsystem activity
- Monitor region/thread activity
- Recognize and resolve program isolation resource contention problems
- Recognize and resolve N-way data sharing contention

Real-time problem-solving views help operators and system programmers solve real-time problems involving resources across single or multiple IMS subsystems. The views allow easy monitoring of IMS subsystem status and region/thread activity. They also permit a quick analysis of lock problems, making it much easier to recognize and resolve program isolation lock contention or N-way data sharing resource contention.
The following figure shows how to use MainView for DBCTL to solve real-time problems:

**Figure 3: Using MainView for DBCTL to solve real-time problems**

To access a list of the views shown with asterisks above, enter `VIEWS nnn*` or `VIEWS nn*`, where the variable represents the first three characters of the view names.
You can then select a specific view from the list.
Manage IMS operations

MainView for DBCTL is a powerful tool for managing IMS operations.

Use MainView for DBCTL to:

- Control and manage Fast Path DEDB areas
- Control and manage full-function databases
- Control and manage application programs
- Cross reference IMS resources, databases, and programs
- Recognize and solve problems with IMS database activity

MainView for DBCTL puts you in the MainView windows environment as it monitors and reports the information you need to see.

Views for managing IMS operations allow database administrators, system programmers, and application programmers to manage Fast Path DEDB areas, full-function databases, and application programs. The views allow easy cross-referencing of IMS resources and assist in the management of IMS database activity.
The following figure shows how to use MainView for DBCTL to manage IMS operations:

**Figure 4: Using MainView for DBCTL to manage IMS operations**

To access a list of the views shown with asterisks above, enter `VIEWS nnn*` or `VIEWS nn*`, where the variable represents the first three characters of the view names. You can then select a specific view from the list.
Where to start

Use the following starting points for understanding how to view information:

- Look at the figures in “MainView for DBCTL overview” on page 19 to get a visual overview.

- Look at the list of contents and pick an area of interest.

- Look at the view categories in the MAIN view, and then hyperlink from a category that interests you to see subcategories and specific views.

- Begin by looking at one of the EZ menus and selecting options from the menu (see “Interface and menus” on page 29).

If you are new to the product, try using one of the basic EZ menus (such as EZIMS for single-system information or EZISSI for multiple systems).

If you have previous experience with IMS or know what information you want to access, you might try using the DBCTL Fast Menu (EZIFAST).

If you are quite experienced and already know the views that you want to access, you can go directly to a view by typing the view name on the COMMAND line.
Interface and menus

The interface takes advantage of the MainView windows mode technology and MainView Explorer.

The MainView windows mode environment and MainView Explorer are described in the *MainView User Guide*.

Interface

The interface enhances the basic MainView windows mode technology in several ways.

Capabilities of the interface

The user interface displays information in views.

With the views, you can:

- Set targets for the system or subsystem you want to monitor
- Monitor multiple targets together in a single system image (SSI) context
- View historical data
- Issue primary commands in any view and line commands in many views
- Hyperlink between views
- Open multiple windows to see different views simultaneously and then save the configuration
- Sort information by any field
- Filter views to display only the information you want to see
Customize views to:

— Include or exclude any field
— Rearrange fields
— Change the width or heading of a field
— Create hyperlinks between views
— Summarize and display data from many resources in a single row
— Set thresholds, assigning a color or character display

Access and customize online Help

You can make use of these functions by following the procedures described in the *MainView User Guide* or the *MainView Administration Guide*.

**Context overview**

A context is a name that identifies a MainView product running on one or more target systems.

A context can be a single target system or a single system image (SSI) that includes multiple target systems.

On some menus, the context is displayed in the target field. On views, the context is displayed in the window information line. To change the context, select the target field or use the CONText command.

Dynamic SSI contexts are automatically populated by MainView *for IMS* to represent natural groupings of targets. MainView *for IMS* provides the following dynamic SSI contexts:

<table>
<thead>
<tr>
<th>Context name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSPLEX</td>
<td>Represents all members of the IMSplex groups associated with your current IMS target.</td>
</tr>
<tr>
<td>MSGROUP</td>
<td>Represents all members of the message sharing groups associated with your current IMS target.</td>
</tr>
<tr>
<td>DSGROUP</td>
<td>Represents all members of the data sharing groups associated with your current IMS target.</td>
</tr>
</tbody>
</table>

When a MainView *for IMS* PAS connects to an IMS target, the PAS automatically creates a dynamic context for any of the group types that the IMS belongs to. For
example, if the target IMS belongs to an IMSplex group named CSLPLX11 you can enter CONTEXT IMSPLEX:CSLPLX11 and your SSI context will automatically include all members of that IMSplex group.

View navigation

Navigation between views is designed to be "point and shoot." In other words, you can position the cursor on any highlighted field in a view, press the Enter key, and access a new view containing related information.

You can start by displaying one of the EZ menus (such as EZIMS for a single system or EZISSI for multiple systems). Position the cursor on any menu item of interest and press Enter to access a view that provides the information you want.

In most views that you access from an EZ menu, you can hyperlink from any object in the far left information column to access an object menu. From the object menu, you can hyperlink to other views that provide detailed, in-context information about the object (resource, job, or workload) you selected. (For a description of the EZ menus and object menus, see “Menus” on page 39.)

Rather than hyperlinking to a view, you can access it directly by typing the view name on any COMMAND line, or you can select the view from a list of views.

You can type MAIN on any COMMAND line to access a functional list of view categories and then select a category to access a list of all the views in the category. From the category list, you can hyperlink to the individual views. Once you are familiar with the category names, you can simply type the category name on any COMMAND line to access the list of views in the category without having to start with the MAIN view.

You can also type VIEWS on any COMMAND line to access a list of all views and then select a view from the VIEWS list. Or you can type VIEWS and the beginning of a view name, followed by as asterisk, to access a list of views that start with the characters you entered. For example, you could enter VIEWS IDA* to get a list of all the database activity views, which start with IDA.

Advantage of hyperlinking

Hyperlinking from one view to another, or from an object menu to a related view, has the advantage of keeping a "filter" on the data in the view.

For example, if you hyperlink to the Program Overview view (IPGSUMR) from the Count field in the Program Count by Type view (IPGTYPR), the IPGSUMR view is filtered to show all application programs of the type you selected.
By contrast, if you navigate to the IPGSUMR view by typing its name on the COMMAND line, you see an unfiltered view that shows all application program types, not just the programs of the type that interest you.

Advantages of typing the view name

Navigating by typing the view name on the COMMAND line is faster and more direct, and you do not have to remember the navigation path to the data.

As you gain experience, you may want to remember and enter the names of views you use often, and then hyperlink from those views to related views.

If you split your screen into multiple windows (as described in the MainView User Guide), you can see more than one view at a time. For example, in one window you can see a tabular view and in another window you can see the data displayed as a result of hyperlinking from a specific row within the tabular view.

Keyboard functions

In the MainView environment, many key functions are the same as they are in ISPF.

For example, the END, DOWN, UP, LEFT, and RIGHT keys are defined and function the same way in both environments.

The Enter key performs multiple functions. You can use it to refresh data in a view if you have not cursor-selected any field and if you do not have any commands entered. If you have multiple windows open, the data is refreshed in all the windows.

You can use the Enter key to execute commands once you have typed them in the primary command field or line command column. If you have multiple windows open, a command is executed only in the window where the cursor was last active.

If you press Enter after cursor-selecting a field with a highlighted header, a hyperlink is executed, taking you to a view containing related information.

If you press Enter after cursor-selecting a field that contains summarized data (a field in a summary view), you will access a detail view displaying all the data that was summarized in the first view. Most summary views provide a hyperlink to detailed views, displaying the data that was summarized. Typically, the detail view is hyperlinked to from the count field.
Online Help

The **PF1** key is used to access online Help.

For information about the view you are in, position the cursor on the view name in the window information line and press **PF1**. For a description of a particular field within a view, position the cursor on the field, then press **PF1**.

To see line commands available within a certain view, position the cursor in the line command column (located to the far left in views that support line commands), and then press **PF1**. You can also access line command information by selecting the ACTIONS hyperlink in the view help.

### Issue IMS commands

You can issue IMS Type-1 and Type-2 commands by using the Issue IMS Commands dialog, which is shown in the following figure:

**Figure 5: Issue IMS Commands dialog**

![Issue IMS Commands dialog](image)

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SCROLL</th>
<th>CSR</th>
<th>MORE: +</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND</td>
<td>Issue IMS Commands</td>
<td>SCROLL</td>
<td>CSR</td>
</tr>
<tr>
<td>Target IMS ID: I13H</td>
<td>Context: I13H51CT</td>
<td>Enter the IMS Command (Prefix classic Type-1 commands with a forward slash)</td>
<td>=&gt; QUERY PGM NAME(DFSIVP4) SHOW(ALL)</td>
</tr>
<tr>
<td>=&gt;</td>
<td>=&gt;</td>
<td>=&gt;</td>
<td></td>
</tr>
<tr>
<td>Response:</td>
<td>Attribute</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PgmName</td>
<td>DFSIVP4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MbrName</td>
<td>I13H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC</td>
<td>0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LrnCmd</td>
<td>IFP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBMPType</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LFP</td>
<td>E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDQPT</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGPSB</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRsnt</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LTranStat</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSchdType</td>
<td>SERIAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Access the Issue IMS Commands dialog

Access the Issue IMS Commands dialog in the following ways:

- Select the **ISSUE IMS COMMANDS** option on any EZ menu.
- Enter the **IMSCMDS** command on the COMMAND line of any EZ menu.
Select the ISSUE IMS COMMANDS option from the:

— Database Menu (IDBMR)
— Program Menu (IPGMR)
— Fast Path DEDB Area Menu (IFPMR)
— Transaction Menu (ITRMSR)
— Region Menu (IRGNMR)

Enter the IMSCMDS command on the COMMAND line of the:

— Database views (IDB*)
— Program views (IPG*)
— Fast Path area views (IFP*)
— Transaction views (ITR*)
— Region views (IRGN* and DRGN*)
— Cross-reference views (IX*)

Use the Issue IMS Commands dialog

IMS commands are typed in the input area toward the top of the dialog.

The following rules apply:

■ Type-1 commands must be preceded by a / (slash).
■ The IMSCMDS command is not valid in SSI mode.

Results from the commands are displayed as follows:

■ Results from Type-2 commands are displayed in the Response area in the bottom of the dialog.
■ Results from Type-1 commands are logged in the PAS journal. You can use the LOGJRNL or LOGMSG views to look at responses as long as the PAS journal messages are being routed to the MVI Logger.
View Containers

A View Container is displayed in MainView Explorer (under EZExplorer) and contains multiple views and charts. BMC provides the following predefined View Containers:

- “IMS Overview (target mode) View Container” on page 35
- “IMS Status (target mode) View Container” on page 35
- “Data Base Activity (target mode) View Container” on page 36
- “PSB DMB Pool Utilization (target mode) View Container” on page 36
- “IMS Systems Overview (SSI mode) View Container” on page 37
- “IMS Systems Status (SSI mode) View Container” on page 38

**IMS Overview (target mode) View Container**

This container displays data graphed over a 4-hour period.

The views in the container show average transaction times, average transaction rates, IMS system and control region CPU utilization, and message queuing.

**IMS Status (target mode) View Container**

This container displays data graphed over a 4-hour period.
The views in the container show a dashboard for a single IMS system identifying key interval metrics, the average transaction times, and message queuing.

Data Base Activity (target mode) View Container

This container displays data graphed over a 4-hour period. The views in the container show I/O rate per second for VSAM/OSAM buffer pools and DEDB databases, average response time for VSAM/OSAM buffer pools and DEDB databases, worst hit ratio for VSAM/OSAM buffer pools, and average DLI call time for Full Function and Fast Path databases.

PSB DMB Pool Utilization (target mode) View Container

This container displays data graphed over a 4-hour period.
The views in the container show data collected by the PSBP, PBPW, DMBP, and DBWP resource monitors.

**IMS Systems Overview (SSI mode) View Container**

This container displays data graphed over a 4-hour period.

The views in the container show average processing rate, average response time, input queue time, and IMS system CPU utilization.
IMS Systems Status (SSI mode) View Container

This container displays data graphed over a 4-hour period.

The views in the container show a dashboard for all IMS systems identifying key interval metrics, the average response times, and average processing rates.

Conventions for view names

Views follow a simple naming convention:

The first character is usually the letter I or D. The next two or three characters are based on the view category (such as RGN for region/thread views and DL for delay views).
If the letters *DTL* follow the category characters, the view is a detail view. If the letters *SUM* follow the category characters, the view is a summarized view, a tabular view, or both. If the view name ends with the letter *R*, the view is usually a real-time view. If the view name does not end with an *R*, the view is usually an interval view.

Easy and fast menus (such as EZIMS, EZISSI, and EZIFAST) begin with the letters *EZ*. EZ menus are standard entry points for MainView products.

---

**Menus**

Menus help you access different views and information by grouping information.

**Access to MainView for IMS Online**

To enter the MainView for IMS Online product, begin at the MainView Selection Menu.

Select the MVIMS (MainView for IMS) option from the MainView Selection Menu to access the IMS Solutions menu, shown in the following figure.

For information about how to access the MainView Selection Menu, see the *MainView User Guide*.

**Figure 6: IMS Solutions menu**

<table>
<thead>
<tr>
<th>OPTION</th>
<th>IMS Solutions</th>
<th>DATE</th>
<th>TIME</th>
<th>USERID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2013/02/11</td>
<td>12:32:36</td>
<td>userid</td>
</tr>
</tbody>
</table>

- **Performance**
  - 1: MVIMS: MainView for IMS ONLINE
  - 2: BATCH: MainView for IMS OFFLINE (4.5 and above)

- **Application Management and Operations**
  - T: MVTA: MainView Transaction Analyzer
  - V: MVVP: MainView VistaPoint
  - A: AUTOMATION: MainView AutoOPERATOR
  - E: ALERTS: Alert Management

- **General Services**
  - M: MESSAGES: Messages and Codes
  - J: JOURNAL: Journal Log
  - P: PARMS: Parameters and Options

When you select the MVIMS option, one of the following panels is displayed:

- The default EZ menu EZISSI if you have not specified a different menu as the initial screen in the Parameter Confirmation panel
- A different EZ menu if you have specified a menu other than EZISSI as the initial screen in the Parameter Confirmation panel
The Parameter Confirmation panel if you have specified YES in the Confirm field of the Parameter Confirmation panel.

You can change the parameter confirmation setting from the MainView Selection Menu by selecting the 0.1.I options, or you can change the option from within the product by typing MVP on any COMMAND line and then selecting I for MVIMS. You can also change the setting by selecting the P option in the IMS Solutions panel.

**EZ menus**

The EZ menus provide easy access to important system performance information.

From the EZ menus, you can select views and other menus. The menu items use symbols as follows:

- A period before a menu option indicates a hyperlink to another view or service.
- A greater-than sign indicates a hyperlink to another menu.
- An asterisk means that the hyperlink is not available. A hyperlink field could have an asterisk because a product is not installed or because the hyperlink doesn’t work in a multiple system context.

After you become familiar with the product, you are more likely to use the following methods to access system performance information:

- Enter the view name on the COMMAND line
- Hyperlink from related views

To display an EZ menu, use one of the following methods:

- Enter the menu name on the COMMAND line
- Enter VIEWS in the COMMAND line and then select the EZ menu from the VIEWS list

**IMS Easy Menu (EZIMS or EZIMSR)**

The IMS Easy Menu (EZIMS or EZIMSR) is a good place to start when you want to view system performance information for a single IMS subsystem.
The menu (Figure 7 on page 41) provides access to all key views and menus. You can select one of the menu options listed under a task category and press Enter to access a specific type of information, collected and displayed in a view.

The EZIMS menu provides access to system performance information gathered during a time interval. For system performance information in real time, use the EZIMSR menu. You can use either menu to:

- View system performance information
- Select the IMS Fast Menu EZIFAST (shown in “IMS Fast Menu (EZIFAST or EZIFASTR)” on page 42) and other EZ menus

Figure 7: IMS Easy Menu (EZIMS)

The interval IMS SSI Easy Menu (EZISSI or EZISSIR) provides options for obtaining performance measurement information about all the IMS subsystems across a group of subsystems.

The EZISSI menu provides access to information gathered during a time interval. For information gathered in real time, see the EZISSIR menu.
Although the options in this menu are specific to multiple IMS subsystems, the menu works just like the other EZ menus described in this chapter. To view data for a specific target, select the **Current Target** field and then select the target from the TGTSEL list. You can also use the CONtext command to specify a target.

**Figure 8: IMS SSI Easy Menu (EZISSI)**

<table>
<thead>
<tr>
<th>Current Target</th>
<th>Status: ACTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I14T52CT</td>
<td>Place cursor on menu item and press ENTER</td>
</tr>
</tbody>
</table>

**IMS Fast Menu (EZIFAST or EZIFASTR)**

The IMS Fast Menu (EZIFAST or EZIFASTR) provides menu item categories that link to more detailed information.
The EZIFAST menu provides access to information gathered during a time interval. For information gathered in real time, see the EZIFASTR menu.

Figure 9: IMS Fast Menu (EZIFAST)

The real-time DBCTL Operations Menu (EZDOPSR) is provided specifically for operations personnel.

The menu provides real-time information about DBCTL resources, DBCTL resource exceptions, DBCTL processing exceptions, and current DBCTL activity. It also provides command capability for DBCTL resources so that you can issue a command for a single resource across multiple IMS subsystems. (Command capability requires installation of the MainView AutoOPERATOR product for IMS.)

You can select the Current Target field to change from one target to another or to change from multiple targets to a single target.
When the context is multiple IMS targets, an asterisk is displayed beside hyperlinks that are available only for a single IMS target. To change the SSI context, you can select the **Context Members** field or use the CONtext command.

**Figure 10: IMS Operations Menu (EZDOPSR)**

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SCROLL</th>
<th>CURR WIN</th>
<th>ALT WIN</th>
<th>WI</th>
<th>DBCTL Operations Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMD</td>
<td>ALW</td>
<td>T</td>
<td>F</td>
<td>EZDOPSR</td>
<td>I13H51CT=*</td>
</tr>
</tbody>
</table>

**DBCTL DBA Easy Menu (EZDDBA or EZDDBAR)**

The interval DBCTL DBA Easy Menu (EZDDBA) is provided specifically for database administrators.

The menu provides hyperlinks to key database-related performance and processing information gathered during a time interval or in real time.

You can select the **Current Target** field to change from one target to another or to change from multiple targets to a single target.
When the context is multiple IMS targets, an asterisk is displayed beside hyperlinks that are available only for a single IMS target. To change the SSI context, you can select the **Context Members** field or use the CONtext command.

**Figure 11: DBCTL DBA Easy Menu (EZDDBA)**

![DBCTL DBA Easy Menu](image)

You can display a view by using the following methods:

- Enter the view name on the COMMAND line.
- Enter **MAIN** on the COMMAND line, selecting the view category from the MAIN list, and then selecting the view from the category list.
- Enter **VIEWS** on the COMMAND line and select a view from the VIEWS list.

You can also hyperlink to many of the views from other views and from EZ menus and object menus.
Manage IMS workflow performance

Use the workflow views to manage IMS workflow and transaction processing throughput.

IMS workflow performance overview

Using the workflow views, you can answer the following performance questions:

- “Is IMS resource usage too high?” on page 49
- “Can IMS support additional regions or threads?” on page 51
- “Is the operating system affecting IMS performance?” on page 52

The workflow views are grouped by the following types of information:

- “DBCTL performance views” on page 54
- “DBCTL plex performance views” on page 55
- “Region thread occupancy views” on page 56

Each view group includes both summary and detail views, and most of the views have a real-time version and an interval version. Real-time views show information from the present time. Interval views show information gathered over a time period. The time period can be either from current or past time.

Tip

Online Help is available for each IPSM view. To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. Online Help is also available for each of the fields in a view. To access help for a field, position the cursor on the field and press the Help key.
Some views are available in both a bar graph format and a text format. The bar graph format displays data in bar graphs to give you a quick visual picture. The text format provides additional numerical information. (Some monitor configurations do not support the extended attributes required for viewing the bar graph format.)

Where to start analyzing workflow performance

A good starting place for analyzing IMS workflow performance is the DBCTL Performance Graph view (DBCDTLGR) for a single IMS or one of the DBCTL plex performance views (DBCPLX*) for multiple IMS subsystems.

Both views are available in a bar graph format and a textual format. The bar graph format of the DBCTL Performance Detail Graph view (DBCDTLGR) is shown in Figure 12 on page 48.

Figure 12: DBCTL Performance Graph view (DBCDTLGR), bar graph format
### Note

Some monitor configurations do not support the extended attributes required for viewing the bar graph format. If your monitor does not support the bar graph format, DBCDTLGR will look like the view shown in Figure 13 on page 49.

### Figure 13: DBCTL Performance Graph view (DBCDTLGR), text form

<table>
<thead>
<tr>
<th>15APR2007 10:45:44</th>
<th>MainView WINDOW INTERFACE (Vx.x.xx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND ===&gt;</td>
<td>SCROLL ===&gt; PAGE</td>
</tr>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
</tr>
<tr>
<td>WI =DBCDTLGR = IMSSxxx= =* =10:45:44= MVIMS= =D=1</td>
<td></td>
</tr>
<tr>
<td>IMS ID.....</td>
<td>Max Regions. 50</td>
</tr>
<tr>
<td>IMSplex.....</td>
<td>Monitored...</td>
</tr>
<tr>
<td>CCTL Systems</td>
<td>Tot Regions 5</td>
</tr>
<tr>
<td></td>
<td>BMP Regions 1</td>
</tr>
<tr>
<td>Avg Thread..</td>
<td>*** Threads.....</td>
</tr>
<tr>
<td>Occupancy..</td>
<td>20  ***</td>
</tr>
<tr>
<td></td>
<td>Allocated.. 10</td>
</tr>
<tr>
<td></td>
<td>High Water. 12</td>
</tr>
<tr>
<td></td>
<td>Low Water. 10</td>
</tr>
<tr>
<td>UOWs........</td>
<td>...25...50...75...100 Threads with</td>
</tr>
<tr>
<td>Per Second. 0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>UOWs........</td>
<td>...5...10...15...20 Excess SQL. 0</td>
</tr>
<tr>
<td>Avg Elapsed 0.10</td>
<td>*</td>
</tr>
<tr>
<td>IMS Job Name</td>
<td>IMSxxx</td>
</tr>
<tr>
<td>IMS CPU Util</td>
<td>10 MVS CPU Util 56</td>
</tr>
<tr>
<td>IMS Paging..</td>
<td>0 MVS Paging. 45</td>
</tr>
</tbody>
</table>

### Tip

Several fields in the DBCDTLGR view hyperlink to other views that contain related information. You can use this view interaction technique to isolate and identify potential problems.

---

**Is IMS resource usage too high?**

To determine whether your IMS resource usage is too high, start by looking at the DBCDTLGR view.
You can begin an analysis of IMS resource usage by looking at the **UOWs Per Second**, **IMS CPU Util**, **IMS Paging**, **Threads with Excess CPU**, **Threads with Excess DLI**, and **Threads with Excess SQL** fields in the DBCDTLGR view. The fields are highlighted in the following figure:

**Figure 15: Fields for checking IMS resource usage (DBCDTLGR view)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS ID</td>
<td>D19H</td>
</tr>
<tr>
<td>IMSplex</td>
<td></td>
</tr>
<tr>
<td>CCTL Systems</td>
<td>2</td>
</tr>
<tr>
<td>Avg Thread Occupancy</td>
<td>20</td>
</tr>
<tr>
<td>UOWs Per Second</td>
<td>0.2</td>
</tr>
<tr>
<td>Avg Elapsed</td>
<td>0.10</td>
</tr>
<tr>
<td>IMS CPU Util</td>
<td>10</td>
</tr>
<tr>
<td>IMS Paging</td>
<td>0</td>
</tr>
<tr>
<td>MVS Name</td>
<td>SYSD</td>
</tr>
<tr>
<td>MVS CPU Util</td>
<td>56</td>
</tr>
<tr>
<td>MVS Paging</td>
<td>45</td>
</tr>
</tbody>
</table>

If a value in one of the highlighted fields is unusual or above normal, determine if the abnormality is related to one of the following situations:

- A heavier workflow; check the **UOWs Per Second** field in the DBCDTLGR view
- Mix of BMPs to DBTs; access the DRGOCCR view (shown in Figure 16 on page 51)
- Changes in the applications themselves

**Figure 16: Region/Thread Occupancy view**

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Typ</th>
<th>CPU</th>
<th>Rate</th>
<th>Occ</th>
<th>ID</th>
<th>Name</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I13HMP2</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>2</td>
<td>I13HMP3</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>3</td>
<td>I13HMP2</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>4</td>
<td>I13HMP4</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>5</td>
<td>I13HIVP4</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>6</td>
<td>I13HIVP5</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>7</td>
<td>I13HMP1</td>
<td>MPP</td>
<td>0</td>
<td>29</td>
<td>0.0</td>
<td>0</td>
<td>I13H SJSC</td>
<td>IMSHR3D</td>
</tr>
</tbody>
</table>

To look at more detailed information about the work being performed and the resources being used by an IMS subsystem, access the DBCTL Performance view (DBCDTLR), shown in Figure 17 on page 51.

**Figure 17: DBCTL Performance view (DBCDTLR)**

<table>
<thead>
<tr>
<th>IMS ID........</th>
<th>D19H CPU Utilization</th>
<th>AVG UOW Duration</th>
<th>0.500</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSplex.......</td>
<td>MVS System....</td>
<td>87 UOWs per second.</td>
<td>5</td>
</tr>
<tr>
<td>IMS Job Name..   IMSxxx</td>
<td>Control Rgn.</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>MVS Name......     SYSD</td>
<td>DLI SAS Rgn.</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Batch Regions        1</td>
<td>BMP Rgns....</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>DBCTL Threads        3</td>
<td>DBRC Rgn......</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>High Number         9</td>
<td>IRLM Rgn......</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Low number.        3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Thread Occ      10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The DBCDTLR view shows how critical resources are being used by IMS.

**Can IMS support additional regions or threads?**

To determine if IMS can support additional regions or threads, check the **Max Regions** and **Threads Allocated** fields in the DBCDTLGR view.
The fields are highlighted in the following figure:

**Figure 18: Fields for determining if IMS can support additional regions or threads**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS ID</td>
<td>D19H</td>
</tr>
<tr>
<td>Max Regions</td>
<td>50</td>
</tr>
<tr>
<td>IMSplex</td>
<td>Monitored</td>
</tr>
<tr>
<td>CCTL Systems</td>
<td>2</td>
</tr>
<tr>
<td>BMP Regions</td>
<td>1</td>
</tr>
<tr>
<td>Avg Thread Occupancy</td>
<td>20</td>
</tr>
<tr>
<td>Allocated</td>
<td>10</td>
</tr>
<tr>
<td>High Water</td>
<td>12</td>
</tr>
<tr>
<td>Low Water</td>
<td>10</td>
</tr>
<tr>
<td>UOWs Per Second</td>
<td>0.2</td>
</tr>
<tr>
<td>Excess CPU</td>
<td>0</td>
</tr>
<tr>
<td>Excess DLI</td>
<td>0</td>
</tr>
<tr>
<td>Excess SQL</td>
<td>0</td>
</tr>
<tr>
<td>Avg Elapsed</td>
<td>0.10</td>
</tr>
<tr>
<td>IMS Job Name</td>
<td>IMSxxx</td>
</tr>
<tr>
<td>MVS Name</td>
<td>SYSD</td>
</tr>
<tr>
<td>IMS CPU Util</td>
<td>10</td>
</tr>
<tr>
<td>MVS CPU Util</td>
<td>56</td>
</tr>
<tr>
<td>IMS Paging</td>
<td>0</td>
</tr>
<tr>
<td>MVS Paging</td>
<td>45</td>
</tr>
</tbody>
</table>

If the value shown in the Max Regions field is greater than the value shown in the Threads Allocated field, IMS can support additional regions/threads for processing.

---

**Is the operating system affecting IMS performance?**

If you have the MainView for z/OS product installed, you can hyperlink from DBCDTLGR to views that show you how the operating system is affecting IMS performance.

**Figure 19: Views for checking the effect of operating system performance**

---

52 **MainView for DBCTL User Guide**
Check the following fields in the DBCDTLGR view to see if the operating system is affecting performance:

- **IMS Paging**: shows the number of page-ins and page-outs for the IMS subsystem
- **MVS CPU Util**: shows the percentage of CPU used by the operating system
- **MVS Paging**: shows the number of page-ins and page-outs for the operating system where IMS is running

The fields are highlighted in the following figure:

**Figure 20: Fields for checking operating system processing (DBCDTLGR view)**

For more information about how to use the operating system views, see the *MainView for z/OS User Guide and Reference*.

**Views for workflow management**

The views used to manage IMS workflow are grouped into the following categories:

- “DBCTL performance views” on page 54
- “DBCTL plex performance views” on page 55
- “Region thread occupancy views” on page 56

Each view category contains several views, and the basic function of the views is essentially the same, with variations based on whether the data displayed is real-time or interval data.
In some views you can take actions to make dynamic system changes. The actions are described in the online view help.

There are several ways that you can customize views, such as including fields that are initially hidden, adding or changing hyperlinks, setting thresholds and threshold colors, and filtering data based on condition criteria. You can customize views by context, scope, and filters. To accommodate your site’s needs, you may want to create screens made up of several views.

The MainView User Guide describes how to customize views and how to create screens.

Each of the view category sections contains a table that shows all the views in the category. A sample real-time view follows the table, along with a brief description of what the view does. For more detailed information about the views or any of their fields, refer to the online Help.

**Note**

All views are described in the online view help. Use the following ways to access the view help:

- Position the cursor on the view name on the window information line and press the **Help** key.
- Enter **HELP** followed by a space and the name of the view on the **COMMAND** line.

All fields in the views are described in the online Help, which you can access by positioning the cursor on the field and pressing the **Help** key.

---

**DBCTL performance views**

The DBCTL performance views display resource usage and workflow performance for a single IMS subsystem. The following DBCTL performance views are provided:

- DBCTL Performance Graph, real time (DBCDTLGR)
- DBCTL Performance Graph, interval (DBCDTLG)
- DBCTL Performance, real time (DBCDTLR)
- DBCTL Performance, interval (DBCDTL)

Figure 21 on page 55 is an example of a real-time DBCTL performance view. You can use the DBCDTLGR view and the other DBCTL performance views to determine
if IMS is meeting its performance objectives. DBCDTLGR shows how critical resources, including application region processing, are being used by IMS.

The **UOWs Per Second** and **UOWs Avg Elapsed** fields are indicators of whether IMS is meeting general throughput and response time objectives.

If IMS is not meeting its objectives, you can check the operating system fields for indications of system resource competition.

**Figure 21: Example of a DBCTL Performance view (DBCDTLGR)**

<table>
<thead>
<tr>
<th>15APR2007</th>
<th>10:45:44</th>
<th>MainView WINDOW INTERFACE (Vx.x.xx)</th>
<th>COMMAND</th>
<th>SCROLL</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curr Win</td>
<td>1</td>
<td>Alt Win</td>
<td>DBCDTLGR</td>
<td>IMSxxx</td>
<td>15APR2007==10:45:44==MVMS==D==1</td>
</tr>
<tr>
<td>IMS ID.....</td>
<td>D19H</td>
<td>Max Regions. 50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSplex....</td>
<td>Monitored</td>
<td>Tot Regions 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCTL Systems</td>
<td>2</td>
<td>BMP Regions 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Thread..</td>
<td>...25...50...75...100 Threads.....</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupancy..</td>
<td>20 ***</td>
<td>Allocated.. 10 *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>High Water. 12 *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low Water.. 10 *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UOWs........</td>
<td>0.2</td>
<td>Excess CPU. 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Second.</td>
<td></td>
<td>Excess DLI. 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UOWs........</td>
<td></td>
<td>Excess SQL. 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Elapsed</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS Job Name</td>
<td>IMSxxx</td>
<td>MVS Name....</td>
<td>SYSD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS CPU Util</td>
<td>10</td>
<td>MVS CPU Util</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS Paging..</td>
<td>0</td>
<td>MVS Paging..</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DBCTL plex performance views**

The DBCTL plex performance views show how well each IMS is processing its workflow and how much of your resources are being used by each IMS across multiple IMS subsystems. The following DBCTL plex performance views are provided:

- DBCTL Plex Performance, real time (DBCPLXR)
- DBCTL Plex Performance, interval (DBCPLX)
- DBCTL Plex Performance Graph, real time (DBCPLXGR)
- DBCTL Plex Performance Graph, interval (DBCPLXG)
- DBCTL Plex Performance by Data Sharing Group, real time (DBCPLSR)
- DBCTL Plex Performance by Data Sharing Group, interval (DBCPLS)
- DBCTL Plex Performance by Data Sharing Group Graph, real time (DBCPLSGR)
Region thread occupancy views

The region/thread occupancy views show BMP and JBP region processing, CICS and ODBA thread processing, and resource usage.

The views show how busy a region/thread is and transaction processing rates. Regions/threads can be viewed for a single IMS subsystem, the operating system, a data sharing group, or across any grouping you choose. The following region/thread occupancy views are provided:

- Region/Thread Occupancy, real time (DRGOCCR)
- Region/Thread Occupancy, interval (DRGOCC)
- Region/Thread Occupancy Graph, real time (DRGOCCGR)
- Region/Thread Occupancy Graph, interval (DRGOCCG)
- Region/Thread Processing Summary, real time (DRGOVWR)
- Region/Thread Processing Summary, interval (DRGOVW)
- CCTL connections, real time (DRGCCTLR)
- CCTL connections, interval (DRGCCTL)

The following figure is an example of a real-time region/thread occupancy view (DRGOCCR):

**Figure 23: Example of a Region/Thread Occupancy view (DRGOCCR)**

15APR2007 11:46:49 ------ MainView WINDOW INTERFACE (Vx.x.xx) ----------------
COMMAND ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
W1 =DRGOCCR=-------------IMSxxx=-----------15APR2007==11:46:49==MVIMS====D====3
CM Reg Region   Rgn Rgn MVS Proc Rgn IMS MVS DBShare
-- ID  Name     Typ CPU CPU  Rate Occ ID   Name     Group
1 CICS4102 DBT   0  18   0.0 100 D19H SYSC     IMSNWAY
2 CICS4102 DBT   0  18   0.0   0 D19H SYSC     IMSNWAY
3 CICS4102 DBT   0  18   0.0   0 D19H SYSC     IMSNWAY

Table 1 on page 57 lists the actions available as a line command in the region/thread occupancy views.

**Note**

Line commands require implementation of the MainView AutoOPERATOR product for IMS. For more information, see the information about activating action line commands the MainView for IMS and MainView for DBCTL Customization Guide.

**Table 1: Line commands in the region/thread occupancy views**

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| P           | Stops a region/thread  
Issues the IMS /STOP REGION command to stop a region or thread (region terminates when current thread UOW is complete) |
| CLs         | Changes a class |
Control UOW elapsed time and transaction delays

Use the response time (CORT) views to analyze and control transaction delays and unit of work (UOW) elapsed time.

UOW elapsed time and transaction delays overview

Use the transaction delay analysis and UOW elapsed time analysis views to answer the following questions:

- Where are delays occurring?
- Which events are contributing to elapsed time?

Elapsed time analysis views about units of work that are completed or are in progress are provided. The views help you quickly determine why elapsed time is not meeting expectations so that you can take steps to resolve the problem. A visual overview is provided in “Control UOW elapsed time and transaction delays” on page 59.

You can use the CORT views to check:

- Processing delays incurred by a unit of work when it tries to obtain a resource
- The resource associated with the delay
- IMS processing events occurring as units of work flow through the system (which reveals events that contribute to unit of work elapsed time)

You can also view unit of work processing delays and events within a workload to determine why a workload of the MainView VistaPoint product is not meeting its objective.
The information in views is hierarchical. Lower-level views provide more detailed information related to information at higher levels.
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Figure 24: Using views to control IMS delays and elapsed time
Interpret data in UOW elapsed time and transaction delay analysis views

Consider the following points when you interpret values reported in the UOW elapsed time and transaction delay analysis views:

- MainView for DBCTL reports on the IMS activity incurred during the processing of CICS transactions that require DL/I resources. MainView for DBCTL does not report on CICS activity overall. Therefore, for DBCTL threads, fields whose headers refer to response time are actually reporting elapsed time of the DL/I thread activity for a unit of work, not response time for the CICS transaction.

When you interpret values shown in the **Elapsed Time** fields, keep in mind that the CICS transaction may consist of multiple DL/I units of work. In most cases, a CICS transaction is a single unit of work. However, it is possible for a CICS transaction to commit resources (completing the current UOW and beginning the next logical UOW) as part of the processing of a single CICS transaction. This process is analogous to a BMP issuing checkpoint calls.

- MainView for DBCTL reports only activity that is a part of the IMS DBCTL. An application may have performed DB2 work, but not as part of its DBCTL thread activity. Therefore, this activity is not reported by MainView for DBCTL.

For information about total transaction execution, refer to data collected in the MainView for CICS product views.

**Note**
MainView for DBCTL UOW elapsed time and transaction delay analysis views display the most complete and meaningful information in target mode, rather than in SSI mode.

Analyze UOW elapsed time problems

Use the DBCDTLGR view to investigate unit of work (UOW) elapsed time problems.

From the DBCDTLGR view, you can hyperlink to other views that show transaction delays, processing events, or a trace of transaction occurrences.

To investigate lengthy elapsed time, you might start with the following views:
Transaction Delays (IDLTR)
This view shows the major causes of delays by workload or by all transactions associated with a particular workload. IDLTR identifies a delay when a transaction is waiting for a resource, and it provides hyperlinks to related views that show more detailed information.

Transaction Processing Events (IFCTR)
This view shows the major transaction flow components that affect elapsed time for a workload or for all transactions affected by a particular workload. From the IFCTR view, you can hyperlink to other views to get more information about where transactions are spending their time.

Where are delays occurring?
A high value in the UOWs Avg Elapsed field of the DBCDTLGR view could be caused by a transaction waiting for a resource.

Figure 25: IMS Performance Graph view (DBCDTLGR)
If the value in the **UOWs Avg Elapsed** field is high, you can hyperlink from the field to the IDLTR view, which shows the delays contributing to unit of work elapsed time.

**Figure 26: Views for determining where delays are occurring**

The IDLTR view is shown in **Figure 27 on page 65**. Use the view to:

- Quickly find out whether delays are caused by thread availability waits or by processing delays
- Determine whether eliminating any of the delay factors would decrease unit of work elapsed time to an acceptable level
- Look for possible causes of delays by hyperlinking to details about:
  - I/O delays
  - Lock delays
  - Latch delays
  - Pool delays
  - DB2 delays
— Other sorts of delays

**Figure 27: Transaction Delays view (IDLTR)**

06AUG2013 13:26:56 ------ MAINVIEW WINDOW INTERFACE (V6.1.00) ------

COMMAND ===> SCROLL ===> CSR
CURR WIN ===> 1 ALT WIN ===>
>W1 =IDLTR==..................<I13H51CT=*========06AUG2013==13:26:56==MVIMS====D===17

<table>
<thead>
<tr>
<th>Transcode ID</th>
<th>IMS</th>
<th>Arv</th>
<th>Proc</th>
<th>Resp</th>
<th>% Inp</th>
<th>% CPU</th>
<th>I/O</th>
<th>Lck</th>
<th>Lth</th>
<th>Pol</th>
<th>Oth</th>
<th>DB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPL0007</td>
<td>I13H</td>
<td>0.357</td>
<td>0.357</td>
<td>0.0500</td>
<td>86</td>
<td>14</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0008</td>
<td>I13H</td>
<td>0.356</td>
<td>0.356</td>
<td>0.0165</td>
<td>94</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0009</td>
<td>I13H</td>
<td>0.357</td>
<td>0.357</td>
<td>0.0575</td>
<td>95</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0017</td>
<td>I13H</td>
<td>0.326</td>
<td>0.326</td>
<td>0.0403</td>
<td>86</td>
<td>14</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0018</td>
<td>I13H</td>
<td>0.320</td>
<td>0.320</td>
<td>0.0143</td>
<td>89</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0019</td>
<td>I13H</td>
<td>0.321</td>
<td>0.321</td>
<td>0.0460</td>
<td>87</td>
<td>13</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0027</td>
<td>I13H</td>
<td>0.302</td>
<td>0.302</td>
<td>0.0690</td>
<td>91</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPL0028</td>
<td>I13H</td>
<td>0.303</td>
<td>0.303</td>
<td>0.0212</td>
<td>93</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>0.302</td>
<td>0.0763</td>
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<td>APPL0037</td>
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<td>0.213</td>
<td>0.0415</td>
<td>84</td>
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<td>APPL0038</td>
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<td>0.213</td>
<td>0.213</td>
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<td>91</td>
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<tr>
<td>APPL0039</td>
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<td>0.216</td>
<td>0.0532</td>
<td>92</td>
<td>8</td>
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</tr>
<tr>
<td>IMFT1H</td>
<td>I13H</td>
<td>0.029</td>
<td>0.000</td>
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</tr>
<tr>
<td>IVTNO</td>
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<td>1.083</td>
<td>0.0229</td>
<td>63</td>
<td>37</td>
<td>5</td>
<td>2</td>
<td>14</td>
<td>5</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNV</td>
<td>I13H</td>
<td>0.741</td>
<td>0.742</td>
<td>0.0224</td>
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<td>38</td>
<td>9</td>
<td>9</td>
<td>24</td>
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<tr>
<td>THDMINO</td>
<td>I13H</td>
<td>0.030</td>
<td>0.030</td>
<td>0.1066</td>
<td>4</td>
<td>75</td>
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<td>THDMUPD</td>
<td>I13H</td>
<td>0.104</td>
<td>0.104</td>
<td>0.0274</td>
<td>54</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The IDLTR view displays information for all processed transactions. For each transaction, you can see how much elapsed execution time contributed to the transaction’s elapsed time. If a delay field is highlighted, you can hyperlink from the field to a more detailed view about the delay.

**Which events are contributing to UOW elapsed time?**

A high UOW average elapsed time reported in the DBCDTLGR view could be caused by transaction processing events.

To check information about processing events for all transactions, access the IFCTR view, shown in Figure 28 on page 66.

You can hyperlink to the IFCTR view from the:

- Transaction Summary option in the IMS Fast Menu (EZIFAST)
- Components of Response option in the IMS Easy Menu (EZIMS) and the IMS SSI Easy Menu (EZISSI)

**Figure 28: Transaction Processing Events view (IFCTR)**

Use the IFCTR view to identify IMS processing events contributing to UOW elapsed time. Then you can hyperlink from highlighted fields to details about the events to determine the major contributors to elapsed time.

For example, if Avg % DLI is high, you can hyperlink from the field to view DL/I execution events and determine the cause of the long execution.

If you find a transaction with high average elapsed time in the IFCTR view, or if you find abnormal indicators in the DBCDTLGR view, you may want to access the ITALIST view, which provides a list of completed transaction trace data sets.

From the ITALIST view, you can access additional details about transactions recorded in a trace, and you can create and execute a query against the trace data in a trace data set.
The views for checking completed transaction traces are shown in the following figure:

**Figure 29: Views for checking completed transaction traces**

- **DBCDTLGR**
  - Look at UOW Avg Elapsed or any excessive indicator

- **UOW Avg Elapsed**
  - IFCTR
    - Look at event processing components

- **Any excessive indicator**
  - ITALIST
    - Look at the list of transaction trace data sets
  - ITALISTD
    - Look at trace data set detail
  - ITAQUERY
    - Select trace data
  - ITASUMxx
    - ITASUMZ
      - Look at summarized trace entries by transaction
  - ITASUM
    - Look at trace entries
The ITALIST view, which is shown in the following figure, is accessible as a menu option in the EZ menus EZIMS, EZIFAST, and EZISSI, as well as several other menus:

**Figure 30: Trace List view (ITALIST)**

Use the ITALIST view to analyze transaction performance and to obtain more information for further analysis by hyperlinking from it to:

- An expanded view for more details about the transactions recorded in the trace
- The ITALMR Trace Menu, which has hyperlinks for examining trace data set details, viewing a summary of all occurrences of a selected transaction, executing trace query requests, and accessing services for managing active and history traces

**Views for transaction delay analysis**

The views you use to manage transaction response time are organized in the following delay groups:

- “Transaction delay views (IDLTR*)” on page 69
- “Database I/O delay views” on page 75
- “Data set I/O delay views (IDLDD*)” on page 77
- “Volume I/O delay views” on page 80
- “Lock delay views (IDLLK*)” on page 82
- “Latch delay views (IDLLH*)” on page 84

To analyze transaction delays, start with the IDLTR view, which shows all transactions and the delays that contributed to each transaction’s response time. If a transaction shows an unusual response time, you can hyperlink from its transaction code field to access a menu that you can use to access additional transaction delay information.
The information displayed in the delay views correlates event and sample data. The accuracy of the statistical analysis depends on the number of observations made. In each of the views, a Confidence Level column is included to reflect the accuracy of the analysis. If information shows a confidence level of None, do not spend time analyzing the information.

**Note**
To access a list of all the CORT views, enter **CORT** on the COMMAND line.

### Transaction delay views (IDLTR*)

The following transaction delay views are provided:

- “Transaction Delays view (IDLTR)” on page 69
- “DB2 Delays by Transaction view (IDLTRDB2)” on page 71
- “I/O Delays by Transaction view (IDLTRIO)” on page 71
- “Latch Delays by Transaction view (IDLTRLH)” on page 72
- “Lock Delays by Transaction view (IDLTRLK)” on page 73
- “Pool Delays by Transaction view (IDLTRPL)” on page 73
- “Other Delays by Transaction view (IDLTROT)” on page 74

**Note**
When a value of <Misc.> is displayed in the **Database Name** field or the **Latch ID** field of a transaction delay view, resources with minimal detail records were summarized into a single record.

### Transaction Delays view (IDLTR)

In the Transaction Delays view the **Avg Resp** field shows the average amount of time that units of work associated with each transaction spent in execution.

You can use the IDLTR view to quickly determine if there is a processing event problem.

The columns to the right break down the delays that occurred. A high percentage in any of the columns indicates where a potential problem could be. For example, if the I/O delay percentage is high, the transaction may be waiting for a device. You can
hyperlink from the %I/O Dly field to access a more detailed view of I/O delays and look for potential causes.

Note

The IDLTR view shows average response time for completed transactions. If you want to check average response time for transactions currently in progress, you can access the IDLTRR view.

You can access the IDLTR view by hyperlinking from the:

- **Resp Time** field in the DBCDTLGR view
- **Tran Delay Factors** option in the DBCTL Menu (DBCMP)

Figure 31: Transaction Delays view (IDLTR)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trancode</td>
<td>Transaction Delay Menu (IDLMT), where you can access more detailed information about transaction delays</td>
</tr>
<tr>
<td>I/O Dly</td>
<td>I/O Delays by Transaction (IDLTRIO), which displays the percentage of elapsed time an I/O event contributed to the transaction’s response time</td>
</tr>
<tr>
<td>Lck Dly</td>
<td>Lock Delays by Transaction (IDLTRLK) displays the transactions being delayed by lock waits and the effect each lock has on response time</td>
</tr>
<tr>
<td>Lth Dly</td>
<td>Latch Delays by Transaction (IDLTRLH), which displays the transactions being delayed by latch waits and the effect each latch has on response time</td>
</tr>
<tr>
<td>Hyperlink from</td>
<td>To access</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Pol Dly</td>
<td>Pool Delays by Transaction (IDLTRPL), which displays the percentage of elapsed time a storage wait for a pool contributed to a transaction's response time</td>
</tr>
<tr>
<td>Oth Dly</td>
<td>Other Delays by Transaction (IDLTROT) identifies any delays that are not displayed in the other delay views</td>
</tr>
<tr>
<td>DB2 Dly</td>
<td>DB2 Delays by Transaction (IDLTRDB2), which displays the percentage of elapsed time DB2 processing waits contributed to transaction response time</td>
</tr>
</tbody>
</table>

**DB2 Delays by Transaction view (IDLTRDB2)**

The DB2 Delays by Transaction view displays the percentage of elapsed time DB2 processing waits contributed to transaction response time.

You can access the IDLTRDB2 view by hyperlinking from the %DB2 Dly field in the IDLTR view to see the effect on response time caused by DB2 delays.

**Figure 32: DB2 Delays by Transaction view (IDLTRDB2)**

You can hyperlink from the Trancode field to display the Transaction Delay Menu (IDLMT), where you can access more detailed information about transaction delays.

**I/O Delays by Transaction view (IDLTRIO)**

For each transaction processed, the I/O Delays by Transaction view displays the percentage of elapsed time an I/O event contributed to the transaction's response time.

The view identifies any I/O activity delays that occurred for:

- Database reads and writes
- PSB reads for programs
- **DMB** reads for a database
- **Intent list** reads for a program
- **Program** fetch
- **Log** write-ahead calls

You can access the IDLTRIO view by hyperlinking from the:

- **%I/O Dly** field in the IDLTR view of transaction delays
- **Trancode** field in the IDLTR view and then selecting the I/O Delays option from the IDLMT Transaction Delay Menu

**Figure 33: I/O Delays by Transaction view (IDLTRIO)**

**Hyperlink from** | **To access**
---|---
%DB Dly | More details about database delays
Trancode | I/O Delay Menu (IDLMTIO), where you can access more detailed information about the I/O delays that are contributing to response time

**Latch Delays by Transaction view (IDLTRLH)**

The Latch Delays by Transaction view displays the transactions being delayed by latch waits and the effect each latch has on elapsed time.

You can access the IDLTRLH view by hyperlinking from the:

- **%Lth Dly** field in the IDLTR view
- **Trancode** field in the IDLLHTR view of latch delays by transaction to see what latch delays contributed to elapsed time.

**Figure 34: Latch Delays by Transaction view (IDLTRLH)**
You can hyperlink from the **Trancode** field to display the Latch Delay Menu (IDLMTLH), where you can access more detailed information about latch delays.

**Lock Delays by Transaction view (IDLTRLK)**

The Lock Delays by Transaction view displays the transactions being delayed by lock waits and the effect each lock has on response time.

You can access the IDLTRLK view by hyperlinking from the `%Lck Dly` field in the IDLTR view to see what lock delays contributed to elapsed time.

**Figure 35: Lock Delays by Transaction view (IDLTRLK)**

You can hyperlink from the **Trancode** field to display the Transaction Lock Delay Menu (IDLMTLK), where you can access more detailed information about lock delays.

**Pool Delays by Transaction view (IDLTRPL)**

For each transaction processed, the Pool Delays by Transaction view displays the percentage of elapsed time a storage wait for a pool contributed to a transaction’s response time.

The view identifies any delays that occurred for the following pool storage:

- **DBWP**
- **DMBP**
- **PSB**
- Extended private area of a PSB pool
- **FPCB**
You can access the IDLTRPL view by hyperlinking from the %Pool Dly field in the IDLTR view to see what pool delays contributed to elapsed time.

**Figure 36: Pool Delays by Transaction view (IDLTRPL)**

You can hyperlink from the **Trancode** field to display the Pool Delay Menu (IDLMTTPL), where you can access more detailed information about pool delays that are contributing to response time.

**Other Delays by Transaction view (IDLTROT)**

The Other Delays by Transaction view identifies any delays that occurred for:

- Database intent, allocation, open, and recovery control
- IRLM, DRBC, and DB2
- DL/I database open
- Command execution
- AO requests
- Fast Path allocation and open, buffer fix, and DMAC
- Fast Path control interval resource contention
- Log buffer wait

You can access the IDLTROT view by hyperlinking from the %Oth Dly field in the IDLTR view to see the effect on response time caused by delays other than those due to I/O activity, pool, DB2, latch, or lock waits.

**Figure 37: Other Delays by Transaction view (IDLTROT)**
You can hyperlink from the Trancode field to display the Other Delay Menu (IDLMTOT), where you can access more detailed information about transaction delays and elapsed time.

**Database I/O delay views**

The following database I/O delay views are provided:

- “Database I/O Delays view (IDLDB)” on page 75
- “Database I/O Delays by Data Set view (IDLDBD)” on page 75
- “Database I/O Delays by IMS view (IDLDBI)” on page 76
- “Database I/O Delays by PSB view (IDLDBP)” on page 76
- “Database I/O Delays by Transaction view (IDLDBTR)” on page 77
- “Database I/O Delays by Volume view (IDLDBV)” on page 77

**Note**

When a value of <Misc.> is displayed in the DB Name or DD Name field or a value of <Misc> is displayed in the VolSer field of a database I/O delay view, resources with minimal detail records were summarized into a single record.

**Database I/O Delays view (IDLDB)**

The Database I/O Delays view shows the databases that are causing I/O delays and their impact on response time.

**Figure 38: Database I/O Delays view (IDLDB)**

<table>
<thead>
<tr>
<th>DB Name</th>
<th>%I/O Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVPDB3</td>
<td>93</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>IVPDB2</td>
<td>3</td>
<td>3</td>
<td>8AB339</td>
</tr>
</tbody>
</table>

To determine the cause and impact of a high I/O delay percentage, hyperlink on the DB Name field. The hyperlink takes you to the Database I/O Delay Menu (IDLMB), where you can access more detailed delay views.

**Database I/O Delays by Data Set view (IDLDBD)**

The Database I/O Delays by Data Set view breaks down the database I/O delays by the data sets used.
For Fast Path, the DD Name field shows the Fast Path area.

No hyperlinks are available on the view.

Database I/O Delays by IMS view (IDLDBI)

The Database I/O Delays by IMS view shows the databases that are causing I/O delays and the impact of the delays on the IMS subsystems that are using the databases.

No hyperlinks are available on the view.

Database I/O Delays by PSB view (IDLDBP)

The Database I/O Delays by PSB view shows the databases that are causing I/O delays and the impact of the delays on the PSBs that are using the databases.

No hyperlinks are available on the view.
Database I/O Delays by Transaction view (IDLDBTR)

The Database I/O Delays by Transaction view shows the databases that are causing I/O delays and the impact of the delays on the transactions that are using the databases.

**Figure 42: Database I/O Delays by Transaction view (IDLDBTR)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>SCROLL</th>
<th>CURR WIN</th>
<th>ALT WIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:53:03</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

You can hyperlink from a database name in the **DB Name** field to access the IDAPSUM view, which provides information about database I/O activity at the physical database level.

Database I/O Delays by Volume view (IDLDBV)

The Database I/O Delays by Volume view breaks down the database I/O delays by the volumes used.

You can use the view to see if a volume is the cause of a database I/O delay.

You can access the IDLDBV view by hyperlinking from a **VolSer** field in the IDLDDC view of data set I/O delays by class.

**Figure 43: Database I/O Delays by Volume view (IDLDBV)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>SCROLL</th>
<th>CURR WIN</th>
<th>ALT WIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:37:39</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

You can hyperlink from a database name in the **DB Name** field to access the IDAPSUM view, which provides information about database I/O activity at the physical database level.

Data set I/O delay views (IDLDD*)

The following data set I/O delay views are provided:

- “Data Set I/O Delays view (IDLDD)” on page 78
- “Data Set I/O Delays by IMS view (IDLDDI)” on page 78
When a value of <Misc.> is displayed in the DB Name or DD Name field or a value of <Misc.> is displayed in the VolSer field of a data set I/O delay view, resources with minimal detail records were summarized into a single record.

### Data Set I/O Delays view (IDLDD)

The Data Set I/O Delays view shows the data sets causing I/O delays and the impact of the delays on response time.

#### Figure 44: Data Set I/O Delays view (IDLDD)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>Alt Win</th>
<th>Current Window</th>
<th>IMS</th>
<th>DD Name</th>
<th>%I/O Dly</th>
<th>Min</th>
<th>Max</th>
<th>VolSer</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:42:23</td>
<td>--------</td>
<td></td>
<td>1</td>
<td></td>
<td>DFSIVD31</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>BAB345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD32</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>BAB345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD33</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>BAB345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BAB339</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

### Data Set I/O Delays by IMS view (IDLDDI)

The Data Set I/O Delays by IMS view shows the data sets that are causing I/O delays and the impact of the delays on the IMS subsystems that are using the data sets.

#### Figure 45: Data Set I/O Delays by IMS view (IDLDDI)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>Alt Win</th>
<th>Current Window</th>
<th>IMS</th>
<th>DD Name</th>
<th>%I/O Dly</th>
<th>Min</th>
<th>Max</th>
<th>VolSer</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:57:24</td>
<td>--------</td>
<td></td>
<td>1</td>
<td></td>
<td>DFSIVD1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>BAB361</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BAB339</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD31</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>BAB345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD32</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>BAB345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD33</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>BAB345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DFSIVD34</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>BAB345</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Data Set I/O Delays by PSB view (IDLDDP)

The Data Set I/O Delays by PSB view shows the data sets that are causing I/O delays and the impact of the delays on the PSBs that are using the data sets.

**Figure 46: Data Set I/O Delays by PSB view (IDLDDP)**

<table>
<thead>
<tr>
<th>DD Name</th>
<th>PSB Name</th>
<th>%I/O Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFSIVD1</td>
<td>DFSIVP1</td>
<td>4</td>
<td>4</td>
<td>BAB361</td>
</tr>
<tr>
<td>DFSIVD2</td>
<td>DFSIVP2</td>
<td>4</td>
<td>4</td>
<td>BAB339</td>
</tr>
<tr>
<td>DFSIVD31</td>
<td>DFSIVP4</td>
<td>6</td>
<td>6</td>
<td>BAB345</td>
</tr>
<tr>
<td>DFSIVD32</td>
<td>DFSIVP4</td>
<td>25</td>
<td>25</td>
<td>BAB345</td>
</tr>
<tr>
<td>DFSIVD33</td>
<td>DFSIVP4</td>
<td>31</td>
<td>31</td>
<td>BAB345</td>
</tr>
<tr>
<td>DFSIVD34</td>
<td>DFSIVP4</td>
<td>12</td>
<td>12</td>
<td>BAB345</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Data Set I/O Delays by Transaction view (IDLDDTR)

The Data Set I/O Delays by Transaction view shows the data sets that are causing I/O delays and the impact of the delays on the transactions that are using the data sets.

**Figure 47: Data Set I/O Delays by Transaction view (IDLDDTR)**

<table>
<thead>
<tr>
<th>DD Name</th>
<th>Trancode</th>
<th>%I/O Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFSIVD1</td>
<td>IVTNO</td>
<td>3</td>
<td>3</td>
<td>DFSIVP1</td>
</tr>
<tr>
<td>DFSIVD2</td>
<td>IVTNV</td>
<td>4</td>
<td>4</td>
<td>DFSIVP2</td>
</tr>
<tr>
<td>DFSIVD31</td>
<td>IVTFD</td>
<td>7</td>
<td>7</td>
<td>DFSIVP4</td>
</tr>
<tr>
<td>DFSIVD32</td>
<td>IVTFD</td>
<td>21</td>
<td>21</td>
<td>DFSIVP4</td>
</tr>
<tr>
<td>DFSIVD33</td>
<td>IVTFD</td>
<td>14</td>
<td>14</td>
<td>DFSIVP4</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Data Set I/O Delays by Volume view (IDLDDDV)

The Data Set I/O Delays by Volume view breaks down the data sets causing I/O delays by the volumes used.

You can use the view to see if a volume is the cause of a data set I/O delay.

You can access the IDLDDDV view by hyperlinking from the **VolSer** field in the:

- IDLDD view of I/O delays by data set
- IDLDDDI view of data set I/O delays by IMS
- IDLDDDP view of data set I/O delays by PSB
- IDLDDTR view of data set I/O delays by transaction

**Figure 48: Data Set I/O Delays by Volume view (IDLDDV)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>Scroll</th>
<th>Current Window</th>
<th>Alternate Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:50</td>
<td>==&gt;</td>
<td>==&gt;</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volume I/O Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFSIVD1 BAB361</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DFSIVD2 BAB339</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>DFSIVD31 BAB345</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>DFSIVD32 BAB345</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>DFSIVD33 BAB345</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>DFSIVD34 BAB345</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

For Fast Path, the **DD Name** field shows the Fast Path area.

No hyperlinks are available on the IDLDDV view.

**Volume I/O delay views**

The following volume I/O delay views are available:

- “Volume I/O Delays view (IDLVL)” on page 80
- “Volume I/O Delays by Database view (IDLVLDB)” on page 81
- “Volume I/O Delays by Data Set view (IDLVLDD)” on page 81
- “Volume I/O Delays by IMS view (IDLVLII)” on page 81
- “Volume I/O Delays by PSB view (IDLVLIP)” on page 82
- “Volume I/O Delays by Transaction view (IDLVLTR)” on page 82

**Note**

When a value of <Misc.> is displayed in the **VolSer** field or a value of <Misc.> is displayed in the **DB Name** or **DD Name** field of a volume I/O delay view, resources with minimal detail records were summarized into a single record.

**Volume I/O Delays view (IDLVL)**

The Volume I/O Delays view shows the volumes that are causing I/O delays and the impact of the delays on elapsed time.
No hyperlinks are available on the view.

**Volume I/O Delays by Database view (IDLVLDB)**

The Volume I/O Delays by Database view shows the volumes that are causing I/O delays and the impact of the delays on the databases that are using the volumes.

No hyperlinks are available on the view.

**Volume I/O Delays by Data Set view (IDLVLDD)**

The Volume I/O Delays by Data Set view shows the volumes that are causing I/O delays and the impact of the delays on the data sets that are using the volumes.

No hyperlinks are available on the view.

**Volume I/O Delays by IMS view (IDLVLI)**

The Volume I/O Delays by IMS view shows the volumes that are causing I/O delays and the impact of the delays on the IMS subsystems that are using the volumes.
Volume I/O Delays by IMS view (IDLVLI)

The Volume I/O Delays by IMS view shows the volumes that are causing I/O delays and the impact of the delays on the IMS that are using the volumes.

No hyperlinks are available on the view.

Volume I/O Delays by PSB view (IDLVLP)

The Volume I/O Delays by PSB view shows the volumes that are causing I/O delays and the impact of the delays on the PSBs that are using the volumes.

No hyperlinks are available on the view.

Volume I/O Delays by Transaction view (IDLVLTR)

The Volume I/O Delays by Transaction view shows the volumes that are causing I/O delays and the impact of the delays on the transactions that are using the volumes.

No hyperlinks are available on the view.

Lock delay views (IDLLK*)

The following lock delay views are provided:

- “Lock Delays view (IDLLK)” on page 83
When a value of <Misc.> is displayed in the Database Name field of a lock delay view, resources with minimal detail records were summarized into a single record.

**Lock Delays view (IDLLK)**

The Lock Delays view shows the locks causing transaction delays and their impact on response time.

**Figure 55: Lock Delays view (IDLLK)**

<table>
<thead>
<tr>
<th>Database DCB RBA/Type</th>
<th>Avg % Dly</th>
<th>Min</th>
<th>Max</th>
<th>Confidence</th>
<th>Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTHISM 1 12 19</td>
<td>*************</td>
<td>19</td>
<td>19</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>CUSTHISM 1 15</td>
<td>***********</td>
<td>15</td>
<td>15</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>CUSTINDX 1 9</td>
<td>*******</td>
<td>9</td>
<td>9</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>&lt;Misc..&gt; 1 *</td>
<td></td>
<td>1</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Lock Delays by IMS view (IDLLKI)**

The Lock Delays by IMS view shows the locks causing delays and the impact on an IMS subsystem.

**Figure 56: Lock Delays by IMS view (IDLLKI)**

<table>
<thead>
<tr>
<th>Database DCB RBA/Type</th>
<th>Avg % Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Misc..&gt; Y19H 1</td>
<td>*</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CUSTHISM 1 E Y19H</td>
<td>************</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>CUSTHISM 1 12 Y19H</td>
<td>************</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>CUSTINDX 1 1 Y19H</td>
<td>*******</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Lock Delays by PSB view (IDLLKP)**

The Lock Delays by PSB view shows the locks causing delays and the impact on a PSB.
You can access the IDLLKP view by hyperlinking from a PSB Name field in the IDLLKTR view of lock delays by transaction.

**Figure 57: Lock Delays by PSB view (IDLLKP)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>Scroll</th>
<th>Window 1</th>
<th>Window 2</th>
<th>Avg % Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:58:46</td>
<td>===&gt;</td>
<td>CSR</td>
<td>IDLLKTR=IDLLKP=IMSxxx=*</td>
<td>15APR2007=09:58:45=MVIMS=D=2</td>
<td>0...........15...........30</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CUSTHISM 1 E PHISMINQ 15</td>
<td></td>
<td>************</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CUSTHISM 1 19 PHISMINQ 19</td>
<td></td>
<td>*************</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Lock Delays by Transaction view (IDLLKTR)**

The Lock Delays by Transaction view shows the lock causing delays and the impact on each transaction.

**Figure 58: Lock Delays by Transaction view (IDLLKTR)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>Scroll</th>
<th>Window 1</th>
<th>Window 2</th>
<th>Avg % Dly</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>09:57:44</td>
<td>===&gt;</td>
<td>SCR</td>
<td>IDLLKTR=IMSxxx=*</td>
<td>15APR2007=09:57:44=MVIMS=D=4</td>
<td>0...........15...........30</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CUSTHISM 1 E THISMINQ 15</td>
<td></td>
<td>************</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CUSTHISM 1 12 THISMINQ 19</td>
<td></td>
<td>*************</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CUSTINDX 1 1 THIDMINQ 9</td>
<td></td>
<td>*********</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Latch delay views (IDLLH*)**

The following latch delay views are provided:

- “Latch Delays view (IDLLH)” on page 85
- “Latch Delays by IMS view (IDLLHI)” on page 85
- “Latch Delays by PSB view (IDLLHP)” on page 85
- “Latch Delays by Transaction view (IDLLHTR)” on page 86

**Note**

When a value of <Misc.> is displayed in the Latch ID field of a latch delay view, resources with minimal detail records were summarized into a single record.
Latch Delays view (IDLLH)

The Latch Delays view shows the latches causing transaction delays and their impact on response time.

**Figure 59: Latch Delays view (IDLLH)**

![Latch Delays view (IDLLH)]

You can hyperlink from the Latch ID field to display the Latch Delay Menu (IDLMH), where you can access views you can use to determine what is causing a latch delay.

Latch Delays by IMS view (IDLLHI)

The Latch Delays by IMS view shows the latches causing delays and the impact on an IMS subsystem.

You can access the IDLLHI view by hyperlinking from an IMS ID field in the IDLLHTR view of latch delays by transaction.

**Figure 60: Latch Delays by IMS view (IDLLHI)**

![Latch Delays by IMS view (IDLLHI)]

No hyperlinks are available on the view.

Latch Delays by PSB view (IDLLHP)

The Latch Delays by PSB view shows the latches causing delays and the impact on a PSB.

You can access the IDLLHP view by hyperlinking from a PSB Name field in the:

- IDLLHTR view of latch delays by transaction
- IDLTRLH view of latch delays by latch

**Figure 61: Latch Delays by PSB view (IDLHP)**

<table>
<thead>
<tr>
<th>15APR2007 10:03:16</th>
<th>MAINVIEW WINDOW INTERFACE (Vx.x.xx)</th>
<th>COMMAND ===&gt;</th>
<th>SCROLL ===&gt;</th>
<th>CSR</th>
<th>CURR WIN ===&gt; 1</th>
<th>ALT WIN ===&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;W1 =IDLLHTR==IDLHP===IMSxxx===*========15APR2007==10:03:16==MVIMS==D==1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latch</td>
<td>Avg % Dly</td>
<td>Min</td>
<td>Max</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>PSB Name</td>
<td>0.........10........20</td>
<td>%Dly</td>
<td>%Dly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;Misc..&gt;</td>
<td>PHDAMINQ</td>
<td>2 **</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Latch Delays by Transaction view (IDLLHTR)**

The Latch Delays by Transaction view shows the latches causing delays and the impact on each transaction.

**Figure 62: Latch Delays by Transaction view (IDLLHTR)**

<table>
<thead>
<tr>
<th>15APR2007 11:32:25</th>
<th>MAINVIEW WINDOW INTERFACE (Vx.x.xx)</th>
<th>COMMAND ===&gt;</th>
<th>SCROLL ===&gt;</th>
<th>CSR</th>
<th>CURR WIN ===&gt; 1</th>
<th>ALT WIN ===&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;W1 =IDLLHTR==IMSSxxx==**********15APR2007==11:33:54==MVIMS==D==4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latch</td>
<td>Avg % Dly</td>
<td>Min</td>
<td>Max</td>
<td>IMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Trancode</td>
<td>0.........10........20</td>
<td>%Dly</td>
<td>%Dly</td>
<td>ID</td>
<td>PSB Name Cls</td>
</tr>
<tr>
<td>LOGL</td>
<td>IVTNO</td>
<td>2 **</td>
<td>2</td>
<td>X71H</td>
<td>DFSIVP1</td>
<td>1</td>
</tr>
<tr>
<td>&lt;Misc..&gt;</td>
<td>THDAMINQ</td>
<td>2 **</td>
<td>2</td>
<td>Y19H</td>
<td>PHDAMINQ</td>
<td>1</td>
</tr>
<tr>
<td>&lt;Misc..&gt;</td>
<td>THDAMUPD</td>
<td>1 *</td>
<td>1</td>
<td>Y19H</td>
<td>PHDAMUPD</td>
<td>2</td>
</tr>
<tr>
<td>&lt;Misc..&gt;</td>
<td>THIDMINQ</td>
<td>1 *</td>
<td>1</td>
<td>Y19H</td>
<td>PHIDMINQ</td>
<td>1</td>
</tr>
<tr>
<td>&lt;Misc..&gt;</td>
<td>THISMUPD</td>
<td>0</td>
<td>0</td>
<td>Y19H</td>
<td>PHISMUPD</td>
<td>2</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Views for UOW elapsed time analysis**

Use the transaction processing views to identify the unit of work processing events that are contributing to transaction unit of work elapsed time.

The views are categorized as components of transaction flow through IMS.

To analyze transaction elapsed time, start with the IFCTR view, where you can:

- Look at processing events for all transactions
- See the IMS processing events that contributed to each transaction’s elapsed time
- Determine where transactions spend their time during IMS processing

From the IFCTR view, select a transaction you are interested in, and then hyperlink from it to access the IFCMT Transaction Processing Menu, an object menu that provides hyperlinks to additional CORT views.
The following IMS transaction processing event views are provided:

- “Transaction Processing Events view (IFCTR)” on page 87
- “Transaction DB2 Processing view (IFCTR2)” on page 88
- “Transaction Application Processing view (IFCTRA)” on page 89
- “Transaction DL/I Processing view (IFCTRDL)” on page 90
- “Transaction DL/I Call Processing view (IFCTRCL)” on page 90
- “Transaction Sync Point Processing view (IFCTRSP)” on page 91
- “Transaction ROLS Processing view (IFCTRRL)” on page 91
- “Transaction Scheduling Processing view (IFCTRS)” on page 92

The information displayed in the views correlates event and sample data. The accuracy of the statistical analysis depends on the number of observations made. In each of the views, a Confidence Level column is included to reflect the accuracy of the analysis. If information shows a confidence level of None, do not spend time analyzing the information.

**Note**

To access a list of all the CORT views, enter CORT on the COMMAND line.

---

**Transaction Processing Events view (IFCTR)**

In the Transaction Processing Events view, average elapsed time is broken down into percentages of elapsed time the transaction spent in execution.

You can use the information to quickly determine if a problem is occurring in a processing event. The columns to the right break down the events that occurred as IMS processed the transaction. A high percentage in any of those columns indicates where a potential problem could exist. For example, if Avg Appl is high, you can hyperlink to a view of application processing for that transaction to see what process may be contributing to the event.

You can hyperlink to the IFCTR view from the:

- Transaction Summary option in the IMS Fast Menu (EZIFAST)
- Components of Response option in the IMS Easy Menu (EZIMS) and the IMS SSI Easy Menu (EZISSI)
- Tran Performance option in the DBCTL Menu (DBCMP)

**Figure 63: Transaction Processing Events view (IFCTR)**

<table>
<thead>
<tr>
<th>IMS Arrv Proc Avg %InputQ</th>
<th>Avg %Elapse</th>
</tr>
</thead>
<tbody>
<tr>
<td>----------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>THDAMINQ I13H 0.030 0.030 0.00551</td>
<td>4 * 75 ************</td>
</tr>
<tr>
<td>THDAMUPD I13H 0.090 0.090 0.00138</td>
<td>54 ********* 46 *******</td>
</tr>
<tr>
<td>IVTNO I13H 0.756 0.758 0.00122</td>
<td>63 ********** 37 ******</td>
</tr>
<tr>
<td>IVTNV I13H 0.756 0.758 0.00114</td>
<td>62 ********** 38 ******</td>
</tr>
<tr>
<td>IMFT1H I13H 0.756 0.758 0.00114</td>
<td>62 ********** 38 ******</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tranocode</td>
<td>Transaction Processing Menu (IFCMT), where you can access more detailed information about the IMS processing events contributing to response time</td>
</tr>
<tr>
<td>Avg %InputQ</td>
<td>Transaction Input Queue Processing (IFCTRQ), shows the average amount of time a message spent in the input queue and the impact on a transaction response time</td>
</tr>
<tr>
<td>% Appl</td>
<td>Transaction Application Processing (IFCTRA), which shows the average amount of time a transaction spent in application processing</td>
</tr>
<tr>
<td>DLI</td>
<td>Transaction DL/I Processing (IFCTRDI), which shows the average amount of time a transaction spent in DL/I execution</td>
</tr>
<tr>
<td>DB2</td>
<td>Transaction DB2 Processing (IFCTR2), which shows the average amount of time a transaction spent in DB2 processing</td>
</tr>
</tbody>
</table>

**Transaction DB2 Processing view (IFCTR2)**

The Transaction DB2 Processing view shows the average amount of time a transaction spent in DB2 processing.

The view shows the amount of time spent processing a call or waiting for CPU and the impact on transaction response time.

You can hyperlink to the IFCTR2 view from the:

- Avg % DB2 field in the IFCTR view
- DB2 option under Components of Response Time in the IMS Fast Menu (EZIFAST)

**Figure 64: Transaction DB2 Processing view (IFCTR2)**

| 15APR2007  | 10:49:13 | ------- MAINVIEW WINDOW INTERFACE (Vx.x.xx) ------- | COMMAND ===> | SCROLL ===> CSR |
| CURR WIN ===> 1 | ALT WIN ===> |
| >W1 =IFCTR2==IMSxxx==*==15APR2007==10:49:12==MVIMS==D==4 | IMS Avg | Avg % DB2 | %CPU | CPU DB2 |
| Trancode ID | Resp | 0.........15........30 | Act Dly Wait |
| IVTFM | X91H | 0.0000 |
| IVTNO | X91H | 0.0209 | 3 ** | 3 |
| IVTNV | X91H | 0.0160 |
| IVTFD | X91H | 0.0012 |

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trancode</td>
<td>DB2 Menu (IFCMT2), where you can access detailed information about transaction processing events and delays</td>
</tr>
</tbody>
</table>

**Transaction Application Processing view (IFCTRA)**

The Transaction Application Processing view shows the average amount of time a transaction spent in application processing.

The view shows where time was spent, such as waiting for CPU to be available (%CPU Dly) or program fetch and load delay (%F/L Dly), and the impact on transaction response time.

You can hyperlink to the IFCTRA view from the:

- **Avg % Appl** field in the IFCTR view
- **Applications option under Components of Response Time in the IMS Fast Menu (EZIFAST)**

**Figure 65: Transaction Application Processing view (IFCTRA)**

| 15APR2007  | 10:32:01 | ------- MAINVIEW WINDOW INTERFACE (Vx.x.xx) ------- | COMMAND ===> | SCROLL ===> CSR |
| CURR WIN ===> 1 | ALT WIN ===> |
| >W1 =IFCTR==IMSxxx==*==15APR2007==10:32:01==MVIMS==D==4 | IMS Avg | Avg % Appl | %CPU | CPU | I/O | F/L | SVC | Othr |
| Trancode ID | Resp | 0.........25........50 | Act Dly Dly Dly Dly Dly Dly |
| IVTFM | X91H | 0.0243 | 61 | 9 |
| IVTNO | X91H | 0.0209 | 3 ** |
| IVTNV | X91H | 0.0160 | 41 |
| IVTFD | X91H | 0.0012 |

You can hyperlink from the **Trancode** field to display the Application Menu (IFCMTA), where you can access detailed information about transaction processing events and delays.
Transaction DL/I Processing view (IFCTRD)

The Transaction DL/I Processing view shows the average amount of time a transaction spent in DL/I execution.

The view shows where time was spent and the impact on transaction response time.

You can hyperlink to the IFCTRD view from the:

- **Avg % DLI** field in the IFCTR view
- DLI option under Components of Response Time in the IMS Fast Menu (EZIFAST)

**Figure 66: Transaction DL/I Processing view (IFCTRD)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>MainView Window Interface (Vx.x.xx)</th>
<th>Command</th>
<th>Alt Win</th>
<th>Current Win</th>
<th>Alt Win</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>05:34:07</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trancode ID</th>
<th>Response</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>X91H</td>
<td>0.0241</td>
<td>35</td>
<td>12</td>
<td>24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trancode</td>
<td>DL/I Menu (IFCMTD), where you can access detailed information about transaction processing events and delays</td>
</tr>
</tbody>
</table>

Transaction DL/I Call Processing view (IFCTRI)

The Transaction DL/I Call Processing view shows the average amount of time a transaction spent in DL/I call processing.

The view shows where time was spent and the impact on transaction response time.

You can hyperlink to the IFCTRI view from the **Avg% Call** field in the IFCTDR view.

**Figure 67: Transaction DL/I Call Processing view (IFCTRI)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>MainView Window Interface (Vx.x.xx)</th>
<th>Command</th>
<th>Alt Win</th>
<th>Current Win</th>
<th>Alt Win</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>10:46:05</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trancode ID</th>
<th>Response</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
<th>Avg% DLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>X91H</td>
<td>0.0241</td>
<td>35</td>
<td>12</td>
<td>24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Views for UOW elapsed time analysis
You can hyperlink from the **Trancode** field to display the DL/I Call Menu (IFCMTI), where you can access detailed information about transaction processing events and delays.

**Transaction Sync Point Processing view (IFCTRP)**

The Transaction Sync Point Processing view shows the average amount of time a transaction spent in sync point processing.

The view shows where time was spent by the IMS sync point manager in acquiring resources and the impact on transaction response time.

You can hyperlink to the IFCTRP view from the **Avg% Sync** field in the IFCTRD view.

**Figure 68: Transaction Sync Point Processing view (IFCTRP)**

You can hyperlink from the **Trancode** field to display the Sync Point Menu (IFCMTP), where you can access detailed information about transaction processing events and delays.

**Transaction ROLS Processing view (IFCTRR)**

The Transaction ROLS Processing view shows the average amount of time a transaction spent in ROLS processing.

The view shows where time was spent and the impact on transaction response time.

You can hyperlink to the IFCTRR view from the **Avg% ROLS** field in the IFCTRD view.

**Figure 69: Transaction ROLS Processing view (IFCTRR)**
You can hyperlink from the **Trancode** field to display the ROLS Menu (IFCMTR), where you can access detailed information about transaction processing events and delays.

**Transaction Scheduling Processing view (IFCTRS)**

The Transaction Scheduling Processing view shows the average amount of time a transaction spent in scheduling.

The view shows where time was spent by the IMS scheduler in acquiring resources and the impact on transaction response time.

You can hyperlink to the IFCTRS view from the **Avg% Schd** field in the IFCTRQ view.

**Figure 70: Transaction Scheduling Processing view (IFCTRS)**

```
15APR2007 10:30:10 ------ MAINVIEW WINDOW INTERFACE (Vx.x.xx) -----------
COMMAND ===> SCROLL ===> CSR
CURR WIN ===> 1       ALT WIN ===>
>W1 =IFCTR====IFCTRS===IMSxxx===*========15APR2007==10:30:10====MVIMS====D====1
 IMS  Avg         Avg % Sched            %CPU  CPU  I/O  Pol  Lch  Oth
Trancode ID   Resp        0.........15........30  Act  Dly  Dly  Dly  Dly  Dly
IVTNV X91H 0.0126   2 *                         2
```

You can hyperlink from the **Trancode** field to display the Scheduling Menu (IFCMTS), where you can access detailed information about transaction processing events and delays.
Examine a user application with transaction tracing

Use transaction tracing to identify problem trends occurring with a user application, transaction, or program. Transaction tracing consists of data collection and views.

Transaction tracing overview

Views and commands are provided with which you can start, stop, and manage traces; query and view trace data; and manage trace logs.

When you trace a transaction, you can:

- Define common detail-trace filtering parameters
  The filters are applied to every detail trace instance for a given IMS environment. Filters can limit which DL/I calls are traced by basing the trace on the elapsed time of the call, status code, or return codes. This can:
  - Ensure that problematic calls are traced (and not lost due to a full buffer)
  - Limit the volume of DL/I call details to review
  - Reduce detail buffer size requirements

  __Note__
  This feature requires the BMC MainView for IMS Management Solution license.

- Qualify a specific by workload selection or by exception filters to limit the trace (for example, by database name or high elapsed time)

- Set automatic start and stop times for the trace when you think the most activity will occur

- Use views to:
— Query a trace to find problematic transactions
— See transaction trace entries
— Expand to see summarized trace data or detailed trace events for a selected transaction

There are different types of transaction traces and different types of transaction trace views.

When you request a trace, you can also ask for the trace data to be recorded to external VSAM data sets, called trace log data sets, for later viewing. Trace log data sets can store summary and detail traces.

Trace logging provides the following capabilities:

■ Log data sets for each trace request
  Each trace request can be assigned its own log data sets, which allows dynamic application traces to be managed separately from system-wide, continuous workload traces, or system exception traces.

■ Flexible space management
  Each trace can be logged to single or multiple data sets either manually preallocated or dynamically allocated and managed by the transaction trace administration views.

■ User-selected logging options
  A trace can be logged by using option defaults or by specifying values for all of the options for complete control.

■ Viewing of active trace data online
  The transaction trace information views (ITAL* and ITAS*) can be used to see the current data from an active trace or from one being logged to a data set.

■ Viewing of historical trace data at any time
  The History Trace (HT) view displays the data sets tracked in the trace directory. You can view the data recorded in these data sets whether the trace was written the same day, last night, a year ago, or even on another system.

■ Tracing of very large applications
  Long-running applications can be traced without loss of data because of online trace storage buffer limitations.
Types of transaction traces

Transaction tracing provides the following types of traces:

<table>
<thead>
<tr>
<th>Trace type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Response time of the transaction, the application CPU time, the IMS CPU time, the number of database calls (DL/I and DB2), and the number of I/Os</td>
</tr>
<tr>
<td>Detail</td>
<td>Each type of database call, its return code and elapsed time (in the order processed), the name of the database accessed, and associated database I/O data and segment search argument, key feedback, and I/O area data. You can define common filters to record only DL/I calls that exceed an elapsed time threshold or that have either a status code or a return code. If a transaction has DB2, CICS, or WebSphere MQ events associated with it, those events are also displayed. Detail trace can be used to debug complex application performance problems associated with the execution of a specific transaction. This data can be saved to data sets for later reference or use on another system.</td>
</tr>
<tr>
<td>Abbreviated</td>
<td>General performance statistics, such as response time, elapsed time, DLI and DB2 call counts, and DLI and DB2 CPU time (with reduced DASD requirements)</td>
</tr>
</tbody>
</table>

Types of transaction trace views

The following types of views are provided for transaction traces:

- **Transaction trace information views**
  These views query and list traces and display trace data. For more information, see “Transaction trace information views” on page 103.

- **Transaction trace administration views**
  These views list traces, display trace data, and provide commands for managing traces and trace logs. For more information, see “Transaction trace administration” on page 128.

Set up trace logging

Before any trace can be started with trace logging, the following items must be in place:

- A trace directory must be allocated, initialized, and identified to BBI.
  The trace directory keeps track of all trace log data sets. There is one trace directory per BBI-SS PAS that is dynamically allocated when the BBI-SS PAS
starts. It is a VSAM linear data set containing one entry for each trace log data set. Each entry indicates the date and time of data set creation, the current status of the data set, the trace target, and other related information. Entries can be added to or deleted from the directory with the History Traces application.

You can set up the trace directory manually or have it set up during customization.

- One or more trace log data sets must be allocated.
  - When you request a trace, you can specify options to dynamically allocate trace log data sets or you can use sample batch jobs to preallocate the data sets.

For information about:

- Setting up the trace directory manually, see the *MainView for IMS and MainView for DBCTL Customization Guide*
- Setting up the trace log data sets manually, see the *MainView for IMS and MainView for DBCTL Customization Guide*
- Maintaining the trace directory and the trace log data sets, see “Transaction trace administration” on page 128

## Request a transaction trace

When you request a trace, a data entry dialog is opened.

Using this dialog, you can specify the type of trace to start, specify whether to use trace logging, and specify trace selection criteria and exception filters.

When you request a transaction trace, you can specifying the following information:

- Name and title for the trace
- Start and stop time for the trace
- Type of trace to perform
- Trace buffer information
- Trace logging information
- Actions to take when a target is not active
Selection criteria and exception filters to limit the amount of data saved

As an option, you can limit which DL/I calls are traced by defining filter parameters for common DL/I calls in the IMFECP00 parameter member. Defining a filter can accomplish the following goals:

— Reduce the size requirement for the detail trace buffers in IMS

— Ensure that problematic DL/I calls will be traced (and not lost because of a full buffer)

— Reduce the volume of DL/I calls to review in your detail traces

Note

This feature requires the BMC MainView for IMS Management Solution license.

Methods for requesting a transaction trace

There are several ways to start a transaction trace:

■ Request a trace online by using the ST primary command. (See “Starting a transaction trace online” on page 99.)

You can also replicate an existing trace as a starting point to request a new trace. (See “Starting a transaction trace by using replication” on page 101.)

For more information, view the Quick Course "MainView for IMS - Managing IMS Traces".

■ Define a SET timer request in a BBI-SS PAS BBPARM data set member that can be started automatically when the system starts or started manually at your request.

■ Define a MainView AutoOPERATOR product EXEC.

Use the IMFEXEC IMF command followed by the service name, optional parameters, and an identifier for the target system. (See the MainView AutoOPERATOR Advanced Automation Guide.) For example:

IMFEXEC IMFC SET REQ=MTRAC TRAN=PAY+ TARGET=IMSVS x
Note
To collect DBCTL thread data, CICS=YES or CICS=ONLINE must be specified in BBP ARM member IMFECP00. For information about IMFECP00, see the MainView for IMS and MainView for DBCTL Customization Guide. To determine the current setting of the CICS parameter, use the IECPSUMR view.

Qualifying selection criteria options

When you request a transaction trace, you can use a plus sign qualifier for the following selection criteria options:

- PROG
- PSB
- REGION
- TERM
- TRAN
- USERID
- DATABASE
- VTAMNODE
- ICONIP
- OTMAMAP
- OTMACORR

The plus sign qualifier can be used generically or positionally:

- As a generic resource name qualifier, the plus sign cannot be followed by any other character. For example, REGION=CICS+ traces only regions whose names begin with CICS.

- As a positional qualifier, the plus sign must be repeated for every character to be replaced. For example, TRAN=A++N+ traces all events that have an identifiable transaction code with an A character in the first position, any two characters before the N, and any character following the N.
Starting a transaction trace online

Use the following information to start a transaction trace online.

For more information, view the Quick Course "Managing IMS traces".

To start a trace

1. Type **ST** on the COMMAND line of any view and press **Enter**.

   The Start IMS Trace Request dialog is displayed, as shown in the following figure.

   For additional information about a field, place the cursor in the field and press **F1** for online Help.

   **Figure 71: Start IMS Trace Request dialog, page 1**

<table>
<thead>
<tr>
<th>Trace Attributes:</th>
<th>Target I14E52CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARM</td>
<td>(Trace Identifier)</td>
</tr>
<tr>
<td>TYPE</td>
<td>S (S-Summary,D-Detail)</td>
</tr>
<tr>
<td>STORAGE</td>
<td>400K (Display Buffer Size)</td>
</tr>
<tr>
<td>LOGTRAC</td>
<td>N (Y/N log trace)</td>
</tr>
<tr>
<td>TITLE</td>
<td>WORKLOAD TRACE</td>
</tr>
</tbody>
</table>

   Specify additional trace options: (*-processed)
   | Selection Criteria | N (Y/N) |
   | Exception Filters  | N (Y/N) |
   | Trace Log Data Set Options | N (Y/N) |
   | Additional Trace Targets | N (Y/N) |

   ENTER to process the request
   END to cancel the request
   HELP to display related help

2. Ensure that the region name shown in the **Target** field is the region in which you want to start the trace.

3. Specify the trace attributes, as described in the following table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARM</td>
<td>Unique name for the trace</td>
<td>Blanks</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td>Default</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>TYPE</td>
<td>Type of transaction trace to perform</td>
<td>S (Summary), a summarized trace is performed</td>
</tr>
<tr>
<td>START</td>
<td>Start time of the trace</td>
<td>Current time</td>
</tr>
<tr>
<td>STOP</td>
<td>Stop time of the trace</td>
<td>Trace continues indefinitely</td>
</tr>
<tr>
<td>STORAGE</td>
<td>Size of the trace display buffer</td>
<td>As specified in IMFBEX00 or in BBIISPxx if IMFBEX00 is not defined For information about IMFBEX00, see the MainView for IMS and MainView for DBCTL Customization Guide. To determine the current settings of the STORAGE parameter, use the IBEXSUMR view.</td>
</tr>
<tr>
<td>LOGTRAC</td>
<td>Whether to perform trace logging for this trace</td>
<td>N, no trace logging is performed</td>
</tr>
<tr>
<td>WRAP</td>
<td>Determines the trace data wrap in the PAS trace buffer</td>
<td>YES, new data overlays old data</td>
</tr>
<tr>
<td>RST</td>
<td>Restart option to be used when a service is quiesced because of an inactive target region</td>
<td>HOT, restarts the trace automatically without loss of previous data</td>
</tr>
<tr>
<td>QIS</td>
<td>Action to be taken when an IMS target is not active</td>
<td>YES, the service is quiesced</td>
</tr>
<tr>
<td>TITLE</td>
<td>Display title for the trace</td>
<td>Name of the service</td>
</tr>
</tbody>
</table>

4 *(optional)* Specify additional trace options:

- Selection Criteria: Limit the amount of data saved.
- Exception Filters: Limit the amount of data saved by exceptions.
- Trace Log Data Set Options: Record traces to external VSAM data sets.

Take the following steps for each option:

a Type **Y** in an additional option field and press **Enter**.

A list of options is displayed. For information about each option, place the cursor in the field and press **F1** for online Help.

b Specify values for the options and press **Enter**.

The Start IMS Trace Request dialog is displayed with an asterisk in the selected additional option field.
5 To start a trace on one or more systems, use one of the following methods:

- Specify a target system in the Context field.

- Type Y in the Additional Trace Targets field, press Enter, select target systems from the displayed list (use the Target Filter field to limit the systems listed), and press Enter.

The Start IMS Trace Request dialog is displayed with an asterisk in the Additional Trace Targets field.

6 (optional) Adjust the values you entered:

- For the trace attributes, type over any of the values.

- For the Selection Criteria and Exception Filters options, repeat Step 4 on page 100, changing or deleting the values you specified. Alternatively, you can type N in either option field to ignore all of the values you specified.

- For the Trace Log Data Set Options, repeat Step 5 on page 101, changing or deleting the values you specified, or in the Trace Log Data Set Options dialog, type RESET to change all the values to their default settings. Alternatively, you can type N in the option field to ignore all of the values you specified.

- For the Additional Trace Targets option, repeat Step 5 on page 101, changing the targets you selected. Alternatively, you can type N in the option field to ignore all of the values you specified.

7 Press Enter.

The trace is started and the Current Traces (CT) view is displayed with the new trace listed.

Starting a transaction trace by using replication

Perform the following actions to start a transaction by using replication:

1 Type CT on the COMMAND line of any view and press Enter.
The Current Traces view is displayed, as shown in the following figure:

**Figure 72: Current Traces view (CT)**

<table>
<thead>
<tr>
<th>CMD Trace ID</th>
<th>Typ</th>
<th>User ID</th>
<th>Trace Title</th>
<th>Start Date</th>
<th>Start Status</th>
<th>Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISTORY</td>
<td>Sum</td>
<td>BOLTM2</td>
<td>HISTORY TRACE</td>
<td>09APR2009</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>ENERLOGT</td>
<td>Sum</td>
<td>ROHMKC</td>
<td>Workload Trace</td>
<td>10APR2009</td>
<td>Active</td>
<td>ACTV</td>
</tr>
<tr>
<td>THDAMINQ</td>
<td>Det</td>
<td>BOLTXC2</td>
<td>Admin trace</td>
<td>14APR2009</td>
<td>Active</td>
<td></td>
</tr>
<tr>
<td>MARY4</td>
<td>Abr</td>
<td>ROHMKC</td>
<td>test 3</td>
<td>14APR2009</td>
<td>Init</td>
<td></td>
</tr>
</tbody>
</table>

2 In the **CMD** field of the trace whose trace options you want to copy, type **R** and press **Enter**.

The Start IMS Trace Request dialog is displayed, as shown in Figure 71 on page 99. All of the options from the selected trace are copied to the dialog.

If the request that is being replicated specified a stop time, the stop time is displayed as the number of intervals remaining until the monitor stops.

3 *(optional)* Adjust the trace options (see “Starting a transaction trace online” on page 99).

4 Press **Enter**.

The trace is started and the Current Traces (CT) view is displayed with the new trace listed.

**Troubleshoot a transaction trace request**

If you experience problems when requesting a transaction trace, review the BBI-SS PAS journal log for messages that can be useful in identifying problems.

Use the **JOURNAL** primary command on one of the following views to access the BBI-SS PAS journal log:

- Trace List (ITALIST)
- Current Trace List (ITALISTC)
- History Trace List (ITALISTH)
- Current Traces (CT)
History Traces (HT)

The JOURNAL primary command is also a hyperlink on the CT and HT views.

Work with transaction traces

In addition to starting a transaction trace, you can:

- Use the transaction trace information views (ITA*) to:
  - View a list of traces
  - View information about individual traces
  - Create and execute a query against the trace data in a trace data set

For more information, see “Transaction trace information views” on page 103.

- Use the Current Traces (CT) view to:
  - View and modify the options that were used to start a trace
  - Stop and purge traces
  - Switch trace logging to a different log data set
  - Quiesce trace logging for a trace

For more information, see “Work with current traces” on page 123.

For more information, view the Quick Course "MainView for IMS - Managing IMS Traces".

Transaction trace information views

The transaction trace views provide high-level trace summary views and detail trace summary views. Additionally, you can use the trace query dialog to find transactions for very specific and detailed query parameters.

You can use the high-level transaction trace information views to find transactions instances with:
High elapsed time

High number of DL/I calls and I/O

Abends

Long running or problematic DL/I or ESS calls

You can use the detail trace summary views to display:

Data for specific transactions

Details about a particular set of transactions identified by a specific criteria

You can use the trace query dialog to find transactions based on a specified set of query parameters and time range.

The following table lists the available transaction trace information views:

<table>
<thead>
<tr>
<th>View name</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace List (ITALIST)</td>
<td>“Display a list of current and history traces” on page 106</td>
</tr>
<tr>
<td>Current Trace List (ITALISTC)</td>
<td>“Display a list of current and history traces” on page 106</td>
</tr>
<tr>
<td>History Trace List (ITALISTH)</td>
<td>“Display a list of current and history traces” on page 106</td>
</tr>
<tr>
<td>Trace Detail (ITALISTD)</td>
<td>“Display trace details” on page 107</td>
</tr>
<tr>
<td>Trace Summary (ITASUM)</td>
<td>“Trace Summary view (ITASUM)” on page 109</td>
</tr>
<tr>
<td>Transaction Summary Data (ITASTRAC)</td>
<td>“Transaction Summary Data view (ITASTRAC)” on page 110</td>
</tr>
<tr>
<td>Transaction Detail Trace (ITADTRAC)</td>
<td>“Transaction Detail Trace view (ITADTRAC)” on page 113</td>
</tr>
<tr>
<td>Trace Summary by Transaction (ITASUMZ)</td>
<td>“Trace Summary by Transaction view (ITASUMZ)” on page 116</td>
</tr>
<tr>
<td>Trace Summary by Transaction detail (ITASUMZD)</td>
<td>“Summary by Transaction detail view (ITASUMZD)” on page 117</td>
</tr>
<tr>
<td>Trace Overview Detail view (ITALSUMD)</td>
<td>Trace Summary Detail view (ITALSUMD) on page 118</td>
</tr>
<tr>
<td>Trace Menu (ITALMR)</td>
<td>“Use transaction trace object menus” on page 120</td>
</tr>
<tr>
<td>Trace Query (ITAQUERY)</td>
<td>“Trace Query dialog and view” on page 121</td>
</tr>
<tr>
<td>Trace Summary by IMS (ITASUMI)</td>
<td>None</td>
</tr>
<tr>
<td>Trace Summary by IMS and PSB (ITASUMIP)</td>
<td>None</td>
</tr>
<tr>
<td>Trace Summary by IMS and Transaction (ITASUMIT)</td>
<td>None</td>
</tr>
<tr>
<td>View name</td>
<td>See</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Trace Summary by PSB (ITASUMP)</td>
<td>None</td>
</tr>
<tr>
<td>Trace Summary by PSB and IMS (ITASUMPI)</td>
<td>None</td>
</tr>
<tr>
<td>Trace Summary by Transaction and IMS (ITASUMTI)</td>
<td>None</td>
</tr>
<tr>
<td>Trace Summary by User (ITASUMU)</td>
<td>None</td>
</tr>
<tr>
<td>Trace Summary by User and Transaction (ITASUMUT)</td>
<td>None</td>
</tr>
</tbody>
</table>

**Tip**

To access online Help for a view, position the cursor on the view name (in the window information line) and press the **Help** key. To access help for a field, position the cursor on the field and press the **Help** key.

---

### Access the transaction trace information views

You can access filtered transaction trace views by selecting trace options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISII, EZISSIR)
- IMS DBA Easy Menu (EZIDBA, EZIDBAR)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering TRACES on the COMMAND line and then selecting a view from the list of transaction trace views.

For more specific information about hyperlinks to the transaction trace views, see the descriptions of the views and displays.

---

### Transaction trace information views line commands

The following line commands are available on the ITASUM* views:
### Display a list of current and history traces

The following views provide a list of trace directory entries and provide information about the traces:

- **Current and History Trace List view (ITALIST)** ([Figure 73 on page 107](#)) displays information about all currently active traces and all history traces. For active traces, one row is displayed for the current trace buffer and one row is displayed for each trace log data set. For inactive history traces, one row is displayed for each trace log data set. You can hyperlink to ITALIST from the:
  - Traces option on the IMS Easy Menu (EZIMS)
  - Traces option on the IMS SSI Easy Menu (EZISSI)
  - View Traces option in the IMS Fast Menu (EZIFAST)
  - View Detail Trace option in the IMS DBA Easy Menu (EZIDBA)

- **Current Trace List view (ITALISTC)** displays information about all current traces. This view is filtered to display current traces only. For active traces, a row is displayed for each trace log data set. For inactive history traces, one row is displayed for each trace log data set.

- **History Trace List view (ITALISTH)** displays information about all history traces. This view is filtered to display history traces only.
All rows associated with a specific trace are displayed together. The Data Type field indicates if the row is for a current buffer (Curr) or for trace records in a history log data set (Hist).

**Figure 73: Trace List view (ITALIST)**

<table>
<thead>
<tr>
<th>Trace Type</th>
<th>Trace ID</th>
<th>Trace Title</th>
<th>Start Date</th>
<th>Start Time</th>
<th>End Date</th>
<th>End Time</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum Hist</td>
<td>ELOGT</td>
<td>WORKLOAD TRACE</td>
<td>12JAN2009</td>
<td>17:29</td>
<td>12JAN2009</td>
<td>18:56</td>
<td>II1ZIMS</td>
</tr>
<tr>
<td>Sum Hist</td>
<td>ENERLOGT</td>
<td>WORKLOAD TRACE</td>
<td>26JAN2009</td>
<td>11:21</td>
<td></td>
<td></td>
<td>II1ZIMS</td>
</tr>
<tr>
<td>Sum Hist</td>
<td>ENRLOG</td>
<td>WORKLOAD TRACE</td>
<td>14JAN2009</td>
<td>13:39</td>
<td>14JAN2009</td>
<td>14:00</td>
<td>II1ZIMS</td>
</tr>
<tr>
<td>Sum Hist</td>
<td>ENRLOGT</td>
<td>WORKLOAD TRACE</td>
<td>23JAN2009</td>
<td>10:52</td>
<td>23JAN2009</td>
<td>12:59</td>
<td>II1ZIMS</td>
</tr>
<tr>
<td>Sum Hist</td>
<td>ETEST</td>
<td>WORKLOAD TRACE</td>
<td>12JAN2009</td>
<td>14:44</td>
<td>12JAN2009</td>
<td>16:32</td>
<td>II10FIMS</td>
</tr>
<tr>
<td>Sum Hist</td>
<td>HISTORY</td>
<td>HISTORY TRACE</td>
<td>02APR2009</td>
<td>08:50</td>
<td>02APR2009</td>
<td>08:54</td>
<td>II1A44CT</td>
</tr>
<tr>
<td>Sum Hist</td>
<td>HISTORY</td>
<td>WORKLOAD TRACE</td>
<td>16FEB2009</td>
<td>12:43</td>
<td>16FEB2009</td>
<td>12:44</td>
<td>II1ZIMS</td>
</tr>
</tbody>
</table>

**Display trace details**

The Trace Detail view (ITALISTD) summarizes the selected trace in fifteen-minute intervals. In addition to its display of trace details and other features, it provides a pathway to hyperlink to the trace query dialog.

You can access the ITALISTD view by using hyperlinks available from specific fields in the following views:

- **ITALIST view** (from the **Start Time** field)
- **ITALMR Trace Menu** (from the **View by Time Period** option)

The ITALISTD view provides statistics that show:

- How many trace records were written during the time period
- Averages for response time, elapsed time, input queue time, database calls, ESS calls, application time percentage, and I/O
- Maximums and minimums for response time, elapsed time, and input queue time, non-I/O wait time, DC, DB, and ESS calls and shows trace ID and type
- Number of ABENDs
- Number of DL/I calls with bad status code
- Number of ESS calls with bad return codes
- Number of DC and ESS DL/I calls that exceeded the defined time threshold

**Note**

If you do not have the BMC MainView *for IMS* Management Solution license, some of these fields display N/A.

To view the number of DL/I calls or ESS calls with bad status or return codes, you need to scroll right in the view by pressing **PF11**.

---

**Figure 74: Trace Detail view (ITALISTD)**

```
25SEP2015 13:51:11 ------ MAINVIEW WINDOW INTERFACE (V6.1.00) ---------------
COMMAND ===>  SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITALISTD=============I14YGBG===*========25SEP2015==13:51:10====MVIMS====D====
- Refresh ON/OFF. OFF    Incl filter masks on field headers
  .Overview/Query        Excl filter Masks on field headers
  Tran Type ===> refresh off ((¬)BMP,MPP,MDP,DBT,ODB,JMP,JBP)..
  Input Type ===> refresh off ((¬)LTERM,OTMA,APPC,MSG SW)........
```

<table>
<thead>
<tr>
<th>Time</th>
<th>Over View</th>
<th>Nbr of Abn Resp</th>
<th>Resp</th>
<th>InpQ</th>
<th>Elap</th>
<th>Elap</th>
<th>DB/DC I/O</th>
<th>ESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>83</td>
<td>0.0165 0.050</td>
<td>0.0117</td>
<td>0.049</td>
<td>0.0048</td>
<td>0.020</td>
<td>3.4</td>
<td>1</td>
</tr>
<tr>
<td>13:30</td>
<td>13:45</td>
<td>83</td>
<td>0.0165</td>
<td>0.050</td>
<td>0.0117</td>
<td>0.049</td>
<td>0.0048</td>
<td>0.020</td>
</tr>
</tbody>
</table>

The view provides the following features:

- The **Refresh ON/OFF** field lets you set up the refresh for the data. For a closed history trace, the default setting is **OFF** because you do not need to refresh the data with each **ENTER**. For an active trace, you can set the refresh to **OFF** to display only the current set of view records.

- The **Overview/Query** field hyperlinks to the Overview Detail view (ITALSUMD). This view shows a detail overview of the overall transaction activity in the trace data set and provides hyperlinks to the Trace Summary by Transaction view (ITASUMZ), the Trace Summary view (ITASUM), and the Trace Query dialog.

- The **Tran Type** and **Input Type** fields can be used to filter the data for this view.

- The **Incl filter mask on field headers** and **Excl filter mask field headers** fields can be used to add or remove filter input mask areas in each of the data field headers.

The view also provides the following additional hyperlink capabilities:

- From the time range indicated in any row of the **Over -View** column, you can hyperlink to the Trace Detail view (ITALISTD) for that time range.

- From the other data field columns, you can hyperlink either to the ITASUMZ view or the ITASUM view with filtering based on the field type and data.

- From the data in any column or row, you can hyperlink to
Trace Summary view (ITASUM)

The Trace Summary view (ITASUM) shows specific occurrences of a transaction and includes transaction run details, such as start time, user ID, message switch, and completion code.

For more information, view the Quick Course "Managing IMS traces”.

You can hyperlink to the ITASUM view from:

- Most of the fields in the ITASUMZ view
- Most of the fields in the ITALISTD view
- The View Trace option on the Trace Menu (ITALMR)

You can filter the displayed information by using the **Add Filter Masks** and **Remove Filter Masks** options:

- To specify filters, select **Add Filter Masks**. A blank line (filter line) replaces the second row of the header. In the blank line, type values for one or more columns and press **Enter**. The view changes to display only rows that meet your specified criteria. For additional information, see the online Help.

- To hide the filter line, select **Remove Filter Masks**.

- To remove the filters, delete the values from the filter line.

You can also use the following line commands to access additional views:

- **ST** to access the Transaction Summary Data view for a transaction instance, (see “Transaction Summary Data view (ITASTRAC)” on page 110)
DT to access the Transaction Detail Trace view for a transaction instance if a detail trace is active for the transaction, (see “Transaction Detail Trace view (ITADTRAC)” on page 113)

Figure 75: Trace Summary view (ITASUM)

<table>
<thead>
<tr>
<th>CM</th>
<th>Trancode Typ</th>
<th>Respns Elapsd Apl DLI</th>
<th>DLI ESS</th>
<th>Total</th>
<th>DLI</th>
<th>DB2</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVTNO</td>
<td>MPP 0.0384</td>
<td>0.0043 0 3 3 0 0.0006 0.0006 0.0000 13:37:24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNO</td>
<td>MPP 0.0342</td>
<td>0.0182 14 4 5 0 0.0012 0.0007 0.0000 13:37:24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNV</td>
<td>MPP 0.0154</td>
<td>0.0039 0 5 1 0 0.0003 0.0003 0.0000 13:37:24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNV</td>
<td>MPP 0.0116</td>
<td>0.0089 60 4 1 0 0.0010 0.0008 0.0000 13:37:24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNO</td>
<td>MPP 0.0276</td>
<td>0.0016 2 3 2 0 0.0004 0.0002 0.0000 13:37:23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNO</td>
<td>MPP 0.0260</td>
<td>0.0185 32 3 1 0 0.0005 0.0004 0.0000 13:37:23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNV</td>
<td>MPP 0.0070</td>
<td>0.0009 2 4 1 0 0.0002 0.0001 0.0000 13:37:23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVTNV</td>
<td>MPP 0.0062</td>
<td>0.0043 66 3 1 0 0.0008 0.0006 0.0000 13:37:23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THDAMUPD</td>
<td>MPP 0.0083</td>
<td>0.0003 9 3 0 0 0.0001 0.0001 0.0000 13:37:22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The ITASUM view provides the following hyperlinks:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trancode</td>
<td>Transaction Summary Data view (ITASTRAC), which displays transaction and program information for a selected transaction instance</td>
</tr>
<tr>
<td>Overview/Query</td>
<td>ITALISTD view, which shows a detail overview of the overall transaction activity in the trace data set and provides hyperlinks to the trace query dialogs</td>
</tr>
</tbody>
</table>

Transaction Summary Data view (ITASTRAC)

The Transaction Summary Data view (ITASTRAC) provides transaction and program information for a selected transaction instance. The view summarizes DC call activity, DL/I call activity, Fast Path activity, DB2 activity, MSC activity, event timings, and CPU times for the transaction instance.

Even if you do not have a detail trace running for the selected transaction, the ITASTRAC view displays the transaction summary data. If you do have a detail trace running, you can hyperlink to it.

For more information, view the Quick Course "Managing IMS traces".

You can use the display (shown in Figure 76 on page 112), for example, to see how many times a transaction instance accessed a database, the types of calls it made and how many, and the transaction elapsed time. An unusually high elapsed transaction time might indicate poor DASD response time.
The ITASTRAC view provides a **CALL OVERVIEW** section that show call statistics and includes DL/I and ESS DL/I metrics.

For information about the any of the sections and fields in ITASTRAC, use the H line command on the section header. If a detail trace is active for the transaction, use the D primary command to access the Transaction Detail Trace view (ITADTRAC).

By using the **Prev Seq Num** and **Next Seq Num** fields, you can browse through the transaction records. You can also select a specific record for viewing by entering the sequence number in the **Seq Num** field.
You can access the ITASTRAC view with the S line command in the Trace Summary view (ITASUM).

Figure 76: Transaction Summary Data view (ITASTRAC)

Related Views
- Detail Trace
- Current Traces
- ICON Events
- Prev Seq Num
- Next Seq Num
- Seq Num

Transaction Summary Data

<table>
<thead>
<tr>
<th>Related Views</th>
<th>Prev Seq Num</th>
<th>Next Seq Num</th>
<th>Seq Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detail Trace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Traces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICON Events</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Trace ID: BOLGBG.I14YGBG.BLANK.SEP25.T1332.V01

No hyperlinks are available on the view.
**Transaction Detail Trace view (ITADTRAC)**

The Transaction Detail Trace view (ITADTRAC) provides a detail trace of IMS, DB2, and MQSeries events that occurred as a transaction was processed.

The content of each trace entry depends on the type of event that is displayed. The entries are either from the online trace storage buffer or, if the request specified logging, from the trace log data set. You can use this display to analyze complex IMS performance problems associated with the execution of specific transactions. The details also indicate whether control data was provided for the ICAL.

For detailed information about the fields on ITADTRAC, press your **Help** key or enter **HELP** on the COMMAND line.

If a detail trace is active for a transaction, you can access ITADTRAC for a transaction instance by:

- Issuing the DT line command beside the transaction instance in the Trace Summary view (ITASUM) or the Region Activity view (IRGNSUMR)
- Selecting the Detail Trace option on the Transaction Summary Data view (ITASTRAC)
- Selecting the Detail Trace Display option from the IRGNMR Region Menu

If ITADTRAC was initiated from the IRGNSUMR view or the IRGNMR menu for an in-progress unit of work, the trace sequence number field (Seq#/#Rgn) contains the region number and the **Trace ID** field shows ACTIVE. For a BMP region, the **Tran** and **User/LTERM** fields will have no value, and the **Arrived** field will contain zeros.

**Figure 77: Transaction Detail Trace view (ITADTRAC)**

<table>
<thead>
<tr>
<th>Event</th>
<th>Resource</th>
<th>AT</th>
<th>Elapsed</th>
<th>CPU</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHD RGN</td>
<td>114YMP1</td>
<td>-11.104ms</td>
<td>181ms</td>
<td>10,932ms</td>
<td>IWATING</td>
</tr>
<tr>
<td>GU DC WTOR</td>
<td></td>
<td>20.051usU</td>
<td>9ms</td>
<td>4us</td>
<td>ok</td>
</tr>
<tr>
<td>ICAL DC WASDSTE1</td>
<td>11.841ms</td>
<td>199us</td>
<td>199us</td>
<td>AIB RC=0108 RS=0580 rx=000c</td>
<td>Optional data was provided</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Display options and scrolling on the ITADTRAC view

You can use the fields in the upper portion of the view to control the information that is displayed in the data area.

You can specify YES or NO in the following fields to control the inclusion of the specified type of data in the view:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAITS</td>
<td>Includes or excludes from the view wait events (such as lock, latch, open, and miscellaneous IWAITS for the transaction instance)</td>
</tr>
<tr>
<td>IO Events</td>
<td>Includes or excludes from the view I/O event entries</td>
</tr>
<tr>
<td>SSA</td>
<td>Includes or excludes from the view the segment search argument area specified with the call</td>
</tr>
<tr>
<td>KFB</td>
<td>Includes or excludes from the view the key feedback data specified with the call</td>
</tr>
</tbody>
</table>

You can use the **IOArea Lines** field to control the number of input and output area data lines in the display.

**Note**

The TRIWAITS parameter in BB Parm member IMFBEX00 controls the recording and display of IWAIT data in detail traces. You can specify that all IWAIT data be displayed or that no IWAIT data be displayed or you can specify types of IWAIT data to be displayed. The default is TRIWAITS=NONE (although I/O IWAIT are always recorded and displayed in detail traces, regardless of the TRIWAITS parameter setting).

For information about IMFBEX00, see the *MainView for IMS and MainView for DBCTL Customization Guide*. To determine the current setting of the TRIWAITS parameter, use the IBEXSUMR view.

View extended data on the ITADTRAC view

The segment search argument and key feedback data is displayed if the SSA and KFB options are set to YES.

The I/O area data is displayed if the IOArea Lines value is greater than zero. (The default for the SSA and KFB fields is NO, and the default for IOArea Lines is 000.) Up to 64 bytes of the data is displayed for each entry in both hexadecimal dump format and character data, as shown in the following IOA example:

```
* IOA 003B0001 C9D4C6E3 F1C84040 4040C4C5 * IMFT1H DE*
* +16 D3C5E3C5 4040D3C1 E2E3F7F8 F5F0F040 *LETE LAST7B500 *
```
Detail trace extended data can be secured at sites that want to control access to sensitive data in detail traces. Unauthorized users who set the SSA or KFB field to YES or change the IOArea Lines field to a number will get error message BBFP2227W when they press Enter. Unauthorized users who enter the DT command in the Region Activity view (IRGNSUMR) or select the Detail Trace Display option in the IRGNMR menu will get error message BBFPA622W. Both messages inform users that they are not authorized to view detail trace extended data.

Security administrators can control access to extended data by securing the resource entity for extended data display action (IOALINES).

| BBM.MVIMS.*.FPA60.IOALINES.OA (for all contexts) |
| BBM.MVIMS. context.FPA60.IOALINES.OA (for a specific context) |
| BBM.MVIMS.*.FP220.IOALINES.OA (for all contexts) |
| BBM.MVIMS. context.FP220.IOALINES.OA (for a specific context) |

**Collecting extended data**

You can use the DCIOAL, EMIOAL, FFIOAL, and FPIOAL parameters in BBPARM member IMFBEX00 to control the maximum length of the I/O area copied into the detail trace for specific call types.

The default for each parameter is 64 bytes of data, and the maximum length you can specify is 65536. If you specify 0 for a parameter, no I/O area data is captured for that data type.

For information about the BBPARM IMFBEX00 member, see the *MainView for IMS and MainView for DBCTL Customization Guide*. To determine the current settings in IMFBEX00, use the IBEXSUMR view.

**Note**

Your changes affect all detail traces, not just the new trace.

**To change the I/O area parameters**

1. Make the parameter changes in BBPARM member IMFBEX00.

2. Issue the reset command .E PARM IMFBEX00.

Trace Summary by Transaction view (ITASUMZ)

The Trace Summary by Transaction view (ITASUMZ) displays transactions summarized by transaction code, and it provides transaction execution details.

For more information, view the Quick Course "MainView for IMS - Managing IMS Traces".

You can access the ITASUMZ view, shown in the following figure, by:

- Requesting a trace query with the ITAQUERY view
- Hyperlinking to ITASUMZ from the View by Transaction option in the ITALMR Trace Menu or from the Nbr of Trans field in the Trace Detail view (ITALISTD)
- Selecting a trace on the Current Traces view (CT) or on the History Traces view (HT)

**Figure 78: Trace Summary by Transaction view (ITASUMZ)**

<table>
<thead>
<tr>
<th>Trancode</th>
<th>Detail View</th>
<th>Cnt</th>
<th>Typ</th>
<th>Abd</th>
<th>Respns</th>
<th>Input Elapsd</th>
<th>Apl DLI</th>
<th>DLI</th>
<th>ESS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVTFD</td>
<td>&lt;link&gt;</td>
<td>1</td>
<td>MDP</td>
<td>0</td>
<td>0.0060</td>
<td>0.0000</td>
<td>0.0060</td>
<td>10</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>IVTNO</td>
<td>&lt;link&gt;</td>
<td>22</td>
<td>MPP</td>
<td>0</td>
<td>0.0277</td>
<td>0.0183</td>
<td>0.0095</td>
<td>19</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>IVTNV</td>
<td>&lt;link&gt;</td>
<td>22</td>
<td>MPP</td>
<td>0</td>
<td>0.0092</td>
<td>0.0052</td>
<td>0.0041</td>
<td>35</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>THDAMUPD</td>
<td>&lt;link&gt;</td>
<td>28</td>
<td>MPP</td>
<td>0</td>
<td>0.0175</td>
<td>0.0162</td>
<td>0.0012</td>
<td>18</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

The ITASUMZ view provides the following hyperlinks:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Filter Masks</td>
<td>Add filter input mask fields for each data header</td>
</tr>
<tr>
<td>Remove Filter Masks</td>
<td>Remove an added filter input mask fields for each data header</td>
</tr>
<tr>
<td>Overview/Query</td>
<td>ITALISTD view, which shows a detail overview of the overall transaction activity in the trace data set and provides a hyperlink to the trace query dialog</td>
</tr>
<tr>
<td>Trace Menu</td>
<td>ITAMI view, for various trace querying and filtering options</td>
</tr>
<tr>
<td>Expand Transactions</td>
<td>ITASUM view, which expands the summarized data and shows the individual transactions</td>
</tr>
<tr>
<td>Trancode</td>
<td>ITAMT Trace Menu, an object menu where you can select other trace summary grouping options for further analysis, refine a query request, or select trace data from a different time period</td>
</tr>
<tr>
<td>Hyperlink from</td>
<td>To access</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Detail View</td>
<td>ITASUMZD view, which shows more detail for the selected data row in a detail view format</td>
</tr>
<tr>
<td>Cnt</td>
<td>Trace Summary view (ITASUM), which shows all transactions for the time period, sorted in descending order by end time</td>
</tr>
<tr>
<td>Abn Cnt</td>
<td>ITASUM view, which shows all instances of the transaction that abended</td>
</tr>
<tr>
<td>Respns Time</td>
<td>ITASUM view, which shows the transaction's response times, starting with the highest</td>
</tr>
<tr>
<td>Input Queue</td>
<td>ITASUM view, sorted to show the highest input queue times for the transaction, starting with the highest</td>
</tr>
<tr>
<td>Elapsd Time</td>
<td>ITASUM view, sorted to show the highest elapsed times for the transaction, starting with the highest</td>
</tr>
<tr>
<td>ApI%</td>
<td>ITASUM view, sorted to show the highest application time-percentage time transactions, starting with the highest</td>
</tr>
<tr>
<td>DLI Calls</td>
<td>ITASUM view, sorted to show the highest number of DL/I calls for the transaction, starting with the highest</td>
</tr>
<tr>
<td>DLI I/O</td>
<td>ITASUM view, sorted to show the highest number of DL/I I/O calls for the transaction, starting with the highest</td>
</tr>
<tr>
<td>ESS Calls</td>
<td>ITASUM view, sorted to show the transactions with the highest number of ESS calls, starting with the highest</td>
</tr>
<tr>
<td>Total CPU</td>
<td>ITASUM view, sorted to show the highest total CPU times for the transaction, starting with the highest</td>
</tr>
<tr>
<td>DLI CPU</td>
<td>ITASUM view, sorted to show the highest DL/I CPU times for the transaction, starting with the highest</td>
</tr>
<tr>
<td>DB2 CPU</td>
<td>ITASUM view, sorted to show the highest DB2 CPU times for the transaction, starting with the highest</td>
</tr>
<tr>
<td>Latest End Time</td>
<td>ITASUM view, sorted to show the latest end times, starting with the highest</td>
</tr>
<tr>
<td>Earliest End Time</td>
<td>ITASUM view, sorted to show the earliest start times, starting with the highest</td>
</tr>
</tbody>
</table>

**Summary by Transaction detail view (ITASUMZD)**

The ITASUMZD view summarizes transaction occurrences for a given time period and shows:

- Average and maximum response, input queue, elapsed, and CPU times
- Averages and maximum DL/I and ESS activity measurements
- DL/I and ESS exception and threshold values
ABEND counts, input type, and more

Figure 79: Summary by Transaction detail view (ITASUMZD)

<table>
<thead>
<tr>
<th>25SEP2015 16:57:33</th>
<th>MAINVIEW WINDOW INTERFACE (V6.1.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND ==&gt; SCROLL ==&gt; CSR</td>
<td></td>
</tr>
</tbody>
</table>
| CURR WIN ==> 1 ALT WIN ==>
| W1 =ITASUMZD=========I14YGBG==*========25SEP2015==16:57:33==MVIMS==D==1 |
| >Trace Menu......... | Total Transactions... 11 |
| Trancode............ | IVTFD Latest End Time..... 13:37:20.910766 |
| IMS Jobname......... | I14YGBG Earliest Start Time. 13:37:00.790614 |
| Latest End Date..... | 25SEP2015 Total ABENDs........ 0 |
| Earliest Start Date. 25SEP2015 Type................ | MDP |
| Response Time Avg 0.005982 PSB Name.............. DFSIVP4 |
| Max 0.014200 Program Name.............. DFSIVA4 |
| Input Q Time Avg 0.000000 User IDs.............. TP14YL09 |
| Max 0.000000 LTERM names.............. TP14YL09 |
| Elapsed Time Avg 0.005982 Class.............. N/A |
| Max 0.014200 From APPC........... 0 |
| Appl Percent Avg 9.82 From OTMA............. 0 |
| Max 31.00 From Msg Switch...... 0 |
| CPU Total Avg 0.001100 WFIs.............. 0 |
| Max 0.001185 Accessed DLI........ 0 |
| --DL1 CPU Avg 0.0001044 Accessed DB2........ 0 |
| Max 0.0001125 Accessed FP.......... 11 |
| --DB2 CPU Avg 0.000000 |
| Max 0.000000 |
| Num DB/DC Calls Avg 3.45 Longest DC Call Avg 1.913472 |
| Max 4.00 Longest DC Call Max 3.021378 |
| Num DB Calls Avg 1.45 Longest DB Call Avg 0.005754 |
| Max 2.00 Longest DB Call Max 0.013893 |
| --Number I/O Avg 1.00 Longest ESS Call Avg 0.000000 |
| Max 1.00 Longest ESS Call Max 0.000000 |
| --Total DB Time Avg 0.005760 DB/DC Errors Avg 0.00 |
| Max 0.013893 DB/DC Errors Max 0.00 |
| --Time per Call Avg 0.004579 ESS Errors Avg 0.00 |
| Max 0.013893 ESS Errors Max 0.00 |
| Num ESS Calls Avg 0.00 DC calls >=Thrsh Avg 0.00 |
| Max 0.00 DC calls >=Thrsh Max 0.00 |
| --Total ESS Time Avg 0.000000 --% of Total Avg 0.00 |
| Max 0.000000 DB/ESS >=Thrsh Avg 0.00 |
| --Time per call Avg 0.000000 Max 0.00 |
| Max 0.000000 --% of Total Avg 0.00 |

For information about the hyperlinks, see the online Help.

Trace Summary Detail view (ITALSUMD)

The Trace Summary Detail view (ITALSUMD) shows statistics for specific transactions. In addition to its display of trace details and other features, use the hyperlink on the Query field to access the Trace Query dialog.

The ITALSUMD view provides statistics that show:

- An overview of the trace, or any 15 minute time interval that you select
- Transaction type and source breakdown
- Application percentage of total elapsed time
**DL/I and ESS call metrics**

You can access the Trace Summary Detail view (ITALSUMD) from the Trace Detail view (ITALISTD) by using the hyperlink available on the **Overview/Query** field.

**Figure 80: Trace Summary Detail view (ITALSUMD)**

<table>
<thead>
<tr>
<th>Time Range</th>
<th>One Intvl Trace ID, Data Set ID... DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>08:00</td>
</tr>
<tr>
<td>End Time</td>
<td>08:15</td>
</tr>
<tr>
<td>Refresh ON/OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction count</td>
<td>927</td>
</tr>
<tr>
<td>-MPPs</td>
<td>672</td>
</tr>
<tr>
<td>-JMPs</td>
<td>0</td>
</tr>
<tr>
<td>-MDPs</td>
<td>255</td>
</tr>
<tr>
<td>-DBCTL Threads</td>
<td>0</td>
</tr>
<tr>
<td>-ODBA Threads</td>
<td>0</td>
</tr>
<tr>
<td>-BMPs</td>
<td>0</td>
</tr>
<tr>
<td>-JBPs</td>
<td>0</td>
</tr>
<tr>
<td>WFIs</td>
<td>603</td>
</tr>
</tbody>
</table>

The following table lists the some of the statistics fields and describes the data they display:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Percent</td>
<td>Average percentage of elapsed time attributed to the application.</td>
</tr>
<tr>
<td>Longest DC call</td>
<td>Longest elapsed time for any DL/I DC call</td>
</tr>
<tr>
<td>Call Time Per Tran</td>
<td>Average total DL/I DB or ESS call time</td>
</tr>
<tr>
<td>Time Per Call</td>
<td>Average time per DL/I DB or ESS call</td>
</tr>
<tr>
<td>Longest Call</td>
<td>Longest elapsed time for any DL/I DB call</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bad Stat Codes</td>
<td>Average number of DL/I DB or DC calls with a non-blank status code that was not excluded from this count by the DFDBCODE or DFDCCODE parameters.</td>
</tr>
<tr>
<td>Longest ESS Call</td>
<td>Longest elapsed time for any ESS call.</td>
</tr>
<tr>
<td>Bad Ret Codes</td>
<td>Average number of ESS calls with a non-zero return code that was not excluded from this count by the DFESCODE parameter.</td>
</tr>
<tr>
<td>Avg DC Calls &gt;= Thrsh</td>
<td>Average number of DC calls that met or exceeded the time threshold specified by the DFTIME parameter.</td>
</tr>
<tr>
<td>Avg DB/ESS Calls &gt;= Thrsh</td>
<td>Average number of DB or ESS calls that met or exceeded the time threshold specified by the DFTIME parameter.</td>
</tr>
<tr>
<td>Longest non I/O wait</td>
<td>Longest non-I/O wait time</td>
</tr>
</tbody>
</table>

For information about the available hyperlinks and a complete list of data fields, see the online Help.

## Use transaction trace object menus

Several object menus are provided to filter transaction trace information for a selected object.

The ITALMR menu is an example of one of the object menus.

*Figure 81 on page 121* provides hyperlinks for examining trace data set details and for viewing a summary of all occurrences of a selected transaction. The menu also provides access to services for managing active and history traces and for executing trace query requests.
You can hyperlink to the ITALMR menu from the Trace ID field in the ITALIST view.

**Figure 81: Trace Menu (ITALMR)**

15APR2013 15:04:13 ------ MAINVIEW WINDOW INTERFACE (V6.1.00) ------------
COMMAND ===> SCROLL ===> CSR
CURR WIN ===> 1 ALT WIN ===> >W1=ITALIST==ITALMR==I13H51CT=*========15APR2013==15:04:07====MVIMS======D====1
Trace Menu
    Timeframe - Realtime
    Trace ID    ->   BMP1
    Trace Title ->   WORKLOAD TRACE B
    Trace Type  ->   Detail
    Data type   ->   History
    Start Date  ->   03APR2013
    Start Time  ->   06:58
    End Date    ->   03APR2013
    End Time    ->   08:33
View/Manage Traces +----------------------+   Tools and Menus
 . View Trace               |   Place cursor on | > MVIMS Main Menu
 . Summarize By Time Period |   menu item and   | > IMS Easy Menu
 . Summarize By Transaction |     press ENTER   | > IMS Fast Menu
 . Manage Active Traces     +----------------------+ . Return...
 . Manage History Traces

**Trace Query dialog and view**

You can use the Trace Query view (ITAQUERY) to create and execute a query against the trace data in a trace data set. However, for more robust queries, BMC also offers a separate trace query dialog. This topic explains both the dialog and the view.

**Trace query dialog**

You can hyperlink to the trace query dialog from the ITALISTD view. (Various trace views have Overview/Query fields that hyperlink to ITALISTD.) From this dialog,
you can build a simple or complex query to drill down to a subset of transactions that you want to analyze more closely.

**Figure 82: Trace Query dialog**

|------------------ Set Trace Query Filters for ITASUMZ view -----------------|
|                                                                             |
| End Date 17NOV2015 (mmddyyyy)                                             |
| End Time 06:15 (hh:mm)                                                    |
| Duration All (nnnu ur=(I)ntvl,(M)inutes,(H)ours,(D)ays,(W)eeks           |
| Add Filter Operators, such as = 'XYZ', to use a filter field               |
| PSB Name                                                                   |
| Tran Name                                                                  |
| Type                          TPI,BMP,CON,MPP,NDP,FPU,DBT,ODB,JMP,JBP       |
| Input Type                    APPC,LTERM,QTMA,MSGSW                      |
| User                          LTERM/TPIPE                                |
| IMS Connect                   OTMA Userid                                |
| Region Name                   Class                                     |
| ABEND Code                    WrkLoad Name                              |

Initial values are approximate maximums for period. Change ** to >= to find records with these maximums. Enter other parameters, such as

- RESP Time **0.226500** ELAP Time **0.182000**
- InputQ Time **0.156700** -%Application **19.37**
- Total CPU **0.001770** DB2 CPU **0.000000**
- DL/I CPU **0.001528** Non I/O wait **0.054639**

When you build a query on the dialog, these guidelines apply:

- The starting values are just the maximums found in the trace. You can enter any values you choose. For example, >=0.0708729 in the Longest DB field to find those with DB calls >= to that value.

- You can set query parameters for any of the trace data fields to find just the BMPs or transactions you are interested in querying.

- You can include filter operators via the MainView Infrastructure QWHERE command.

**Note**

For help with the filter operators or with any fields on the dialog, see the online Help.
- Some pre-populated fields begin with **. The value following ** represents the approximate maximum value for that particular trace measurement. To use that field in your query, remove the ** and either accept the displayed value or replace it with your own value. Leaving the field as is (with ** at the beginning) omits that field from the query.

- When you finish, pressing the END key executes the query and displays your selected transaction in the ITASUMZ field.

### Trace Query view

You can also use the Trace Query view (ITAQUERY) to create and execute a query by selecting the trace ID and the data set name ID (or token) in the view's TraceID, DsnID field (shown in Figure 83 on page 123). The data retrieved is displayed in the ITASUMZ view.

In the COMMAND field, you can enter R to execute your query request or Q to modify the QWHERE filter that the query uses. You can use the QWHERE filter to create complex expressions and use other trace filter parameters. You can specify other trace query parameters for trace ID, data set ID, transaction code, and PSB name, and you can specify thresholds for response and elapsed times.

**Note**

You can hyperlink to the ITAQUERY view from the Trace ID, Data Set ID field in the ITALISTD view.

#### Figure 83: Trace Query view (ITAQUERY)

```
12OCT2015 16:46:33 ------ MainView WINDOW INTERFACE (Vx.x.xx) ***************
COMMAND ===>             SCROLL ===> HALF
CURR WIN ===> 1         ALT WIN ===>
W1 =ITAQUERY=============IMSxxx===*========12OCT2015==16:46:31====MVIMS====D====1
Trace Query Request

Command.......(required)            R- Run, Q- Edit QWHERE
TraceID,DsnID (required) ABR3,32
Time Period......... 21MAY2015 12:09 1I Update with TIME command
Workload Name......... *
Transaction Code....... *
PSB Name................. *
Response Time       >= 1.0
Elapsed Time         >= 0.5
```

No hyperlinks are available on the view.

### Work with current traces

The Current Traces view (CT) displays current application traces that are active or complete. It is allowed in target mode only.
In Figure 84 on page 124, each row shows the trace ID, title, trace type, target name, and when the trace was started for active traces.

Use the CT view to:

- View the options that were used to start a trace; see “Viewing the options that were used to start a trace” on page 125
- Modify the options that were used to start a trace; see “Modifying the options that were used to start a trace” on page 125
- Stop traces; see “Stop a trace” on page 126
- Purge traces; see “Purge a trace” on page 127
- Switch trace logging to a different log data set; see “Switch trace logging to a different log data set” on page 127
- Quiesce trace logging for a trace; see “Quiesce trace logging for a trace” on page 127

For more information, view the Quick Course "Managing IMS traces".

### Access the CT view

Use the following methods to access the CT view:

- Type CT on the COMMAND line of any view and press Enter.
- Select the Current Traces option on the IMS Admin Easy Menu (IZIADMIN).

#### Figure 84: Current Traces view (CT)

<table>
<thead>
<tr>
<th>CMD</th>
<th>Trace ID</th>
<th>Typ</th>
<th>User ID</th>
<th>Trace Title</th>
<th>Start Date</th>
<th>Start Status</th>
<th>Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISTORY</td>
<td>Sum BOLTSM2</td>
<td>HISTORY TRACE</td>
<td>09APR2009</td>
<td>09:50 Complete</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENERLOGT</td>
<td>Sum ROHMKC</td>
<td>Workload Trace</td>
<td>10APR2009</td>
<td>11:51 Active ACTV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THDAMENG</td>
<td>Det BOLTXC2</td>
<td>Admin trace</td>
<td>14APR2009</td>
<td>11:05 Active</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MARY4</td>
<td>Abr ROHMKC</td>
<td>test 3</td>
<td>14APR2009</td>
<td>11:52 Init</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the CT view:
Viewing the options that were used to start a trace

Use the W (Show) line command on the CT view to display the options that were used to start the trace.

The IMS Trace Request dialog is displayed, showing the options that were specified on the Start IMS Trace Request dialog.

You cannot change any of the displayed information. For more information about working with the Start IMS Trace Request dialog, see “Request a transaction trace” on page 96.

To view the information for the additional trace options

1. In one or more of the Specify additional trace options fields, enter a Y and press Enter.

2. Enter the END command to exit the display.

Modifying the options that were used to start a trace

Use the M (Modify) line command on the CT view to display the options that were used to start the trace.

The IMS Trace Request dialog is displayed, showing the options that were specified on the Start IMS Trace Request dialog.

For more information about working with the Start IMS Trace Request dialog, see “Request a transaction trace” on page 96.

To view the information for the additional trace options

1. In one or more of the Specify additional trace options fields, enter a Y and press Enter.

You can change the values in the following fields:

- Trace Attributes
Work with transaction traces

- WRAP
- RST
- QIS

- Trace Log Data Set Options
- Number of logs
- Overwrite logs
- Archive PROC
- Log switch time
- Volumes
- Primary CYLS
- SMS Data class
- SMS Management class

2. Exit the display in one of the following ways:
   - Enter the END command to exit the display without saving changes.
   - Press Enter to save changes and exit the display.

Stop a trace

A transaction trace can be stopped automatically or manually:

- To stop a transaction trace automatically, specify a stop time when the trace is requested. See “Request a transaction trace” on page 96.
  When the stop time occurs, the trace is stopped and all collected data is retained.

- To stop a transaction trace manually, use one of the following methods:
  - Use the Z (Stop) line command on the CT view. The trace is stopped, all collected data is retained, and the stop time of the trace is changed to the current time.
  - Change or add a stop time for a trace by using the M (Modify) line command. See “Modifying the options that were used to start a trace” on page 125.
— Use the P (Purge) line command on the CT view. See “Purge a trace” on page 127.

**Purge a trace**

To purge the data that was collected for a trace, use the P (Purge) line command on the CT view.

A confirmation dialog is displayed.

---

**WARNING**

Do not purge a trace that is actively logging trace data. The logger tasks might experience 0C4 abends as a result of trace data buffers that get freed by this command. Use the Z or Q line command to stop a transaction trace.

---

**Switch trace logging to a different log data set**

Use the I (Switch) line command on the CT view to switch a trace log data set if more than one data set was defined in the logging options of the trace request.

An archive request for the trace log data set just deactivated is started if the trace request specified an archive procedure.

If the I command is issued and only one log data set is defined, logging either reuses the same data set or quiesces. Logging resumes with the same data set if the Overwrite logs option was Y when the trace request was specified. Logging quiesces if the Overwrite logs option was N.

**Quiesce trace logging for a trace**

Use the Q (Quiesce Logging) line command on the CT view to quiesce trace logging for a trace.

Trace logging must have been requested when the trace was started. The trace continues to run, but no data is written to the a trace log.

Once quiesced, logging cannot be restarted for the trace. To restart logging, you must purge the request with the P line command. Another request for the trace, with the logging options specified must be activated.
Transaction trace administration

The History Traces (HT) view displays historical trace log data sets in the trace directory for all IMS, DB2, and CICS systems managed by a PAS.

It is allowed in target mode only.

The HT view (shown in Figure 85 on page 129) displays one row per log data set in the trace directory and identifies the trace ID, title, trace type, target name, start and end time of trace.

Uses of the History Traces (HT) view

Use the HT view to:

- View a list of trace log data sets in the trace directory
- View and delete entries in a trace log data set; see “View entries in a trace log data set” on page 130
- View information about a trace log data set; see “Viewing information about a trace log data set” on page 130
- Delete a trace directory entry and a trace log data set; see “Deleting a trace directory entry and a trace log data set” on page 130
- Import and register a trace log data set to the trace directory; see “Importing and registering a trace log data set” on page 132
- Reset, verify, free, and archive a trace log data set; see “Manage a trace log data set” on page 134
- Print trace reports for a trace log data set; see “Print a trace report” on page 134
- Start and stop the trace directory; see “Start and stop the trace directory” on page 145

Access the HT view

Use the following methods to access the HT view:

- Type **HT** on the COMMAND line of any view and press **Enter**.
Select the History Traces option on the IMS Admin Easy Menu (IZIADMIN).

**Figure 85: History Traces view (HT)**

<table>
<thead>
<tr>
<th>14APR2009 15:51:31</th>
<th>MainView WINDOW INTERFACE (V6.0.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMMAND</strong></td>
<td>SCROLL ====&gt; CSR</td>
</tr>
<tr>
<td><strong>CURR WIN</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>ALT WIN</strong></td>
<td>&gt;</td>
</tr>
<tr>
<td>&gt;W1 =HT-------------</td>
<td>I11Z12--------------</td>
</tr>
<tr>
<td></td>
<td>14APR2009=15:41:07---MVIMS=---D=---</td>
</tr>
</tbody>
</table>

- History Traces

Commands: NEW DELETE STARTDIR STOPDIR CT (Current Traces) JOURNAL
Directory: BOLTM1.TS44.TRACEDIR Used(77 of 512)
Line CMDs: S (Select), W (Show), D (Delete), R (Reset), P (Print)
V (Verify), N (New), F (Free), A (Archive)

<table>
<thead>
<tr>
<th>CMD Trace</th>
<th>Typ Trace Title</th>
<th>User Id</th>
<th>Target</th>
<th>Owning</th>
<th>Start Date</th>
<th>Start Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISTORY</td>
<td>Det HISTORY TRACE</td>
<td>BOLEFH1</td>
<td>I11A44CT TS44</td>
<td>07APR2009</td>
<td>09:02</td>
<td></td>
</tr>
<tr>
<td>LOGTEST</td>
<td>Sum WORKLOAD TRACE</td>
<td>BOLTMS1</td>
<td>I11ZIMS TS44</td>
<td>03APR2009</td>
<td>22:01</td>
<td></td>
</tr>
<tr>
<td>HISTORY</td>
<td>Det HISTORY TRACE</td>
<td>BOLEFH1</td>
<td>I11A44CT TS44</td>
<td>02APR2009</td>
<td>08:50</td>
<td></td>
</tr>
<tr>
<td>THDAMINQ</td>
<td>Det WORKLOAD TRACE</td>
<td>BOLTXC2</td>
<td>I9J440CT TS44</td>
<td>24MAR2009</td>
<td>10:50</td>
<td></td>
</tr>
<tr>
<td>TESTH44</td>
<td>Sum WORKLOAD TRACE</td>
<td>BOLTM2</td>
<td>I11ZIMS TS44</td>
<td>11MAR2009</td>
<td>16:32</td>
<td></td>
</tr>
<tr>
<td>HIST2</td>
<td>Det WORKLOAD TRACE</td>
<td>BOLTFH6</td>
<td>I10L43CT TS44</td>
<td>05MAR2009</td>
<td>09:22</td>
<td></td>
</tr>
<tr>
<td>TEST</td>
<td>Sum WORKLOAD TRACE</td>
<td>BOLTM2</td>
<td>I11ZIMS TS44</td>
<td>27FEB2009</td>
<td>08:05</td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the HT view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace ID</td>
<td>Trace Summary by Transaction view (ITASUMZ), which displays transactions summarized by transaction code</td>
</tr>
<tr>
<td>Start Time</td>
<td>Trace Detail view (ITALISTD), which displays a summarization 15 minute intervals of the trace records in the selected trace</td>
</tr>
</tbody>
</table>

**Tip**
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

**Creating a trace log data set from the IMS log**

You can use BBSAMP member IMFLOGTR to create a summary trace from the IMS log and record it in a trace log data set.

Use BBSAMP member IMFTARC to set up a started task for automatic archiving of a TLDS. The task is executed when a data set is full, when logging switches to another data set, or when the trace completes as specified with the Archive PROC option in the initial MTRAC data entry panel.

1. Unload the trace log data set to a GDG (generation data group) data set.
2. PGM=JXTRES marks the trace log data set as RESET in the header.
You also can use the IMFTARC member as a model to create a batch job to archive or reset a log data set instead of using a started task. IMFTARC can be invoked from the History Traces panel with an A line command if it is specified with the Archive PROC option in the initial MTRAC data entry panel. Otherwise, it must be submitted manually.

View entries in a trace log data set

Use the S (Select) line command on the HT view to load the selected log data set and display the Trace Summary by Transaction view (ITASUMZ).

The ITASUMZ view displays transactions summarized by transaction code and provides transaction execution details.

Viewing information about a trace log data set

Use the W (Show) line command on the HT view to display information about the trace associated with the selected log data set.

The IMS Trace Request dialog is displayed, showing the options that were specified on the Start IMS Trace Request dialog.

You cannot change any of the displayed information. For more information about working with the Start IMS Trace Request dialog, see “Request a transaction trace” on page 96.

To view the information for the additional trace options

1. In one or more of the Specify additional trace options fields, enter a Y and press Enter.

2. Enter the END command to exit the display.

Deleting a trace directory entry and a trace log data set

You can use the History Traces view (HT) to delete trace directory entries from the trace directory.

You can also specify that you want to physically delete the associated trace log data set.

You can delete:
Multiple entries at one time

A single entry

To delete multiple trace directory entries

1 Use the DELETE primary command on the History Traces view (HT).

The Delete Trace Directory Entries dialog is displayed, shown in the following figure:

**Figure 86: Delete Trace Directory Entries dialog**

---

**COMMAND ===> DeleteTraceDirectoryEntries**

**Directory:** BOLTS.MTS44.TRACEDIR

Delete by trace id's: (specific or generic)

<table>
<thead>
<tr>
<th>Trace ID</th>
<th>Trace ID</th>
<th>Trace ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace ID</td>
<td>Trace ID</td>
<td>Trace ID</td>
</tr>
</tbody>
</table>

Delete by log data set name: (specific or generic)

<table>
<thead>
<tr>
<th>DSN</th>
<th>DSN</th>
<th>DSN</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSN</td>
<td>DSN</td>
<td>DSN</td>
</tr>
</tbody>
</table>

Delete by date:

<table>
<thead>
<tr>
<th>From Date</th>
<th>To Date</th>
<th>Older than</th>
</tr>
</thead>
<tbody>
<tr>
<td>(DDMMYYYY)</td>
<td>(DDMMYYYY)</td>
<td>(DDMMYYYY)</td>
</tr>
</tbody>
</table>

**ENTER** to process the request

**RESET** to clear input fields

**END** to cancel the request

**HELP** to view related help
---

2 Specify selection criteria for the trace directory entries you want to delete.

You can specify entries by trace ID, trace log data set name, and by date. You can use generic entries for trace IDs and data set names.

For more information about any of the fields, see the online Help.

3 Press **Enter**.

A confirmation dialog is displayed for each entry that meets the criteria you specified.

Verify the information on each confirmation dialog. For each entry, you can specify that you want to also delete the indicated trace log data set. At any time during the confirmation, you can indicate that you do not want to confirm additional entries.

4 Press **Enter**.
The entries are deleted.

If you specified to delete a trace log data set and the data set is cataloged, a confirmation screen is displayed. If the data set is not cataloged, no confirmation is required.

To delete a single trace directory entry

1 Use the D (Delete) line command on the History Traces view (HT).

The Delete Trace Directory Entry dialog is displayed, shown in the following figure:

![Figure 87: Delete Trace Directory Entry dialog](image)

2 Verify the information

3 Specify if you want to physically delete the trace log data set associated with the entry by typing Y in the Also delete the trace log data set? field.

4 Press Enter.

If the data set is cataloged, a confirmation screen is displayed. If the data set is not cataloged, no confirmation is required.

Importing and registering a trace log data set

You can use the History Traces view (HT) to manually add trace log data sets to the trace directory.
For example, you can move the data sets from one system to another. Enter the data set name only. The application automatically verifies each name you enter.

**To import and register a trace log data set (TLDS)**

1. On the History Traces view (HT) use one of the following commands:
   - **NEW** primary command
   - **N** (New) line command; information from the log data set for the row is used to populate the Create Trace Directory Entries dialog

   The Create Trace Directory Entries dialog is displayed, shown in the following figure:

   **Figure 88: Create Trace Directory Entries dialog**

   ![Create Trace Directory Entries dialog](image)

   The dialog shows:
   - **Trace Directory:** BOLTSM.TS44.TRACEDIR
   - **Log Data Set Name** fields where you can specify up to 10 log data set names.

   To add a log data set:
   2. Type the name of a log data set that you want to add to the trace directory.
      - You can specify up to 10 log data set names in the **Log Data Set Name** fields.
   3. Press **Enter**.

   Each log data set processed and verified. The processing results are displayed in the **Response** fields. The following responses are possible:
<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLDS ADDED</td>
<td>Trace log data set was added to the directory.</td>
</tr>
<tr>
<td>TLDE ALREADY EXISTS</td>
<td>Trace log data set already exists in the directory.</td>
</tr>
<tr>
<td>CANNOT ALLOCATE</td>
<td>Trace log data set cannot be allocated.</td>
</tr>
<tr>
<td>CANNOT READ</td>
<td>A non-VSAM linear data set was specified and it is not a valid data format for a trace log data set.</td>
</tr>
<tr>
<td>DOES NOT EXIST</td>
<td>Data set name is not cataloged.</td>
</tr>
<tr>
<td>NOT TLDS</td>
<td>Work area could not be obtained or the data set does not contain trace data.</td>
</tr>
</tbody>
</table>

## Manage a trace log data set

Use the following line commands on the History Traces view (HT) to manage trace log data sets:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R (Reset)</td>
<td>Marks the log data set for reuse</td>
</tr>
</tbody>
</table>
| V (Verify) | Matches the directory against the log data set and updates the directory with information from the log data set  
If the data set is not cataloged, the status is changed to NOCAT. If there is any error in reading this information, the status is changed to INV (invalid). |
| F (Free) | Closes and deallocates the selected log data set if a trace is not being written to it  
This command can also be used when another user is viewing the same trace log. |
| A (Archive) | Initiates the archive started task (STC) for the selected log data set  
The archive option must have been specified when the trace request was made for the trace associated with the log data set. If archiving was not specified for this log data set, the request is ignored.  
The started task makes a copy of the data to tape or to a GDG (generation data group) data set and marks the trace log data set as available for reuse. |

## Print a trace report

You can print a report of a trace:
Online by using the History Traces view (HT)

When you request a trace report online, you use the HT view. The print JCL is generated and then you submit or save it.

You can print from one, unarchived trace log data set only. You specify criteria to indicate what data you want contained in the report.

For more information, see “Printing from an online application” on page 1350.

In batch mode by using the WATBTRAC batch utility job

When you use the batch utility job, you copy a sample job and modify it to meet your needs. You can print from multiple trace log data sets, including archived data sets. You specify criteria to indicate what data you want contained in the report.

For more information, see “Print with a batch utility job” on page 136.

The output format of the report is 90 characters wide with the first position reserved for an attribute character.

**Printing from an online application**

Before printing from the HT view, you must copy the skeleton JCL located in BBPROF member WATBPRNT.

Copy WATBPRNT to an individual user data set (BBPROF) or to a site data set (SBBPROF). The BBPROF or SBBPROF data set must be defined in the CLIST (MainView CLIST) used to start the terminal session. For more information about BBPROF, see the MainView Customization Reference.

---

**Note**

The print command is available only when the terminal session is operating under ISPF.

---

**To print from the HT view**

1. Use the P (Print) line command on the History Trace view (HT).
The BATCH TRACE PRINT dialog is displayed.

**Figure 89: BATCH TRACE PRINT dialog**

```
| COMMAND ===> |
| Update job ==> N (Y/N - update job statement) (END to edit JCL) |
| Title line 1 ==> |
| Title line 2 ==> |

Data Set Name ==> BOLTS.M11Z.MARY5.APR14.T1335.V01

Data Selection:
- From date ==> 14APR2009 (DDMMMYYYY) Time ==> 1335 (HHMM)
- To date ==> Time ==> 
- TYPE ==> (DBT, MPP, BMP, CON, MDP, NDP, FPU, TPI, blank)
- TRAN ==> PROG ==> 
- DLICNT ==> IOCNT ==> 
- DB2CNT ==> ABEND ==> NO (YES/NO)
- DLITIME ==> DB2TIME ==> 
- ELAPSED ==> RESPONSE ==> 

Report Selection:
- LTRAC ==> YES (YES/NO)
- STRAC ==> NO (YES/NO)
- DTRAC ==> NO (YES/NO)
```

**Print with a batch utility job**

You can specify one or more trace log data sets in a series of DD statements with the ddnames in the form TRACINxx.

Only trace log data sets can be specified in this manner. To specify archived trace log data sets, use the DSN in the ARCIN DD statement.

If you do not know the exact names of the trace data sets, you can use the TRACEID keyword to specify which trace is to be printed. In this case, you must also use the TRACEDIR DD statement to specify the trace directory data set. It is recommended but not required that you use the TARGET, DATE, and TIME keywords to further qualify which trace data sets are to be selected.

You can use the batch utility job WATBTRAC to print history trace data offline. To do so, you must modify and then submit the JCL described in this section. The skeleton JCL to print trace data sets is a single-step procedure located in BBSAMP member WATBTRAC.

The individual JCL control statements specify how to read the input data set for each of the requested traces and how to format the output. The statements and control card input keywords are described in the following tables:
Table 3: WATBTRAC JCL control statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRINT</td>
<td>WATBPRNT program and region required to run the program</td>
</tr>
</tbody>
</table>
|                 | The GMWK option in the PARM field is used to increase the size of the summary work area needed to process trace data sets that contain a very large number of transactions. The option increases the summary work area for all services (LTRAC, STRAC, and so on). The syntax rules for GMWK are similar to those for the operating system JCL REGION parameter. The size specified should be greater than 128K. Storage acquired with the option is below the 16M line and is limited by the largest private area available in the operating system. When the GMWK option is used, the job's REGION size may need to be adjusted accordingly. Use the following general guideline to determine the size of GMWK: \( GMWK = 1700 + (72 \times \text{number of unique transactions summarized}) \)
<p>| STEPLIB DD      | Program library containing the WATBPRNT load module                                                                                      |
| SYSPRINT DD     | Data set for printing all input statements and program messages                                                                         |
|                 | The SYSPRINT DD statement must exist. If it is not found, a WTO is issued and the run is terminated.                                        |
| SYSUDUMP DD     | Dump data set for problem determination                                                                                                  |
| STD1 DD         | DDname for the default report                                                                                                            |
| TRACINxx DD     | One or more trace log data sets (TLDs) as input for trace data formatting                                                              |
|                 | If TRACINxx is defined, TRACEDIR and ARCIN are ignored. This DD must refer to a VSAM trace data set (a TLD not archived to tape), written by the online trace. Multiple TLDs data sets can be processed if you specify each one in a DD statement with a ddname of TRACINxx, where xx is any valid set of characters. Each of the TLDs is processed in the order it exists in the job stream. |
| TRACEDIR DD     | Trace directory data set                                                                                                                 |
|                 | If no TRACINxx DD statement is found, the TRACEDIR DD statement is processed. If you specify TRACEDIR DD, you must use the TRACEID keyword. All trace data sets defined with this trace ID are eligible for printing. |
| ARCIN DD        | Archived TLDS                                                                                                                             |
|                 | TRACIN and TRACEDIR must be dummied or you must specify NULLFILE.                                                                       |
| REPORT1 DD      | DDname for the trace print output                                                                                                         |
| SYSIN DD        | Input data set containing the control card specifying the amount of detail to print                                                      |</p>
<table>
<thead>
<tr>
<th>Keyword and Operand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB</td>
<td>ABEND</td>
</tr>
<tr>
<td>CLASS=(nnn,...nnn)</td>
<td>The keyword selects only transactions from the specified class or classes. Valid transaction classes are 1 to 999. To specify multiple classes, separate each value with a comma. The specification can extend to multiple lines. For example: <code>CLASS=(1,2,3,4,5,6,7)</code></td>
</tr>
<tr>
<td>DATABASE=(dbName,...dbName)</td>
<td>The variable represents a database name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by database name. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example: <code>DATABASE=(ABC*,D+F*,GHIJK, DB6,DB7)</code></td>
</tr>
<tr>
<td>DATE=ddmmmyyyy</td>
<td>ddmmmyyyyy-ddmmmyyyyy</td>
</tr>
<tr>
<td>Keyword and Operand</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| **D | DAY=nn | nn-nn** | The variable represents a day or a range of days as a relative number from the date of the first trace entry (first date is 1, up to a maximum of 99) in the trace buffer or trace log data set. The keyword selects a subset of the entries by a day or range of days.  
If there is only one day’s data, the END TIME timestamp is hh:mm:ss.  
If the trace buffer or trace log data set contains more than one day's data, END TIME changes to dd-hh:mm:ss, where dd is the day number relative to the date of the first record in the trace buffer or trace log data set.  
If DAY is not specified, but TIME is, the default is the day of the most current record in the buffer or trace log data set. |
| **DB2C | DB2CNT<nnnnnn | >nnnnnn | =nnnnnn** | The variable represents the number of DB2 database calls. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by DB2 database call counts.  
You can specify the variable as a single numeric value or as a range.  
For example:  
`DB2CNT=100, DB2CNT>100, DB2CNT<100, or DB2CNT=1-100` |
| **DB2PLAN=(planName,... planName)** | The variable represents a DB2 plan name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by DB2 plan name.  
You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example:  
`DB2PLN=(ABC*,D+F*,GHIJK, DP6,DP7)` |
| **DB2T | DB2TIME<nnnnnn | >nnnnnn | =nnnnnn** | The variable represents CPU time in milliseconds. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by DB2 elapsed time.  
You can specify the variable as a single numeric value or as a range.  
For example:  
`DB2TIME=200, DB2TIME>200, DB2TIME<200, or DB2TIME=1-200` |
| **DLIC | DLICNT<nnnnnn | >nnnnnn | =nnnnnn** | The variable represents number of DL/I database calls. The parameter selects a subset of the trace entries in the online trace storage buffer or trace log data set by DL/I database call counts.  
You can specify the variable as a single numeric value or as a range.  
For example:  
`DLICNT=10, DLICNT>10, DLICNT<10, or DLICNT=1-10` |
<table>
<thead>
<tr>
<th>Keyword and Operand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLIT</td>
<td>DLITIME(&lt;nnnnnn), (&gt;nnnnnn), (=nnnnnn)</td>
</tr>
<tr>
<td>DTRAC=YES</td>
<td>NO</td>
</tr>
<tr>
<td>EL</td>
<td>ELAPSED(&lt;nnnnnn), (&gt;nnnnnn), (=nnnnnn)</td>
</tr>
<tr>
<td>IOC</td>
<td>IOCNT(&lt;nnnnnn), (&gt;nnnnnn), (=nnnnnn)</td>
</tr>
<tr>
<td>LEVEL=1</td>
<td>2</td>
</tr>
<tr>
<td>■ 1 prints DL/I call activity for transaction events.</td>
<td></td>
</tr>
<tr>
<td>■ 2 prints DL/I call activity and, for IMS calls, prints database I/O events that occurred during call processing (the default).</td>
<td></td>
</tr>
<tr>
<td>■ 3 prints DL/I call activity and, for IMS calls, prints segment search argument, key feedback, and I/O area data (SSA, KFB, and IOA).</td>
<td></td>
</tr>
<tr>
<td>■ 4 prints all the information of levels 1, 2, and 3.</td>
<td></td>
</tr>
<tr>
<td>LTRAC=YES</td>
<td>NO</td>
</tr>
<tr>
<td>MSW</td>
<td>The keyword selects only transactions that are a result of a message switch.</td>
</tr>
<tr>
<td>Keyword and Operand</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| OTMAMEM=(tjName,... tjName) | The variable represents a TMEMBER or IMS Connect job name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by TMEMBER or JOB name. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example: 
| | OTMAMEM=(ABC*,D+F*,GHIJK, TM6, J7) |
| PR | PROGRAM=(pName,... pName) | The variable represents a program name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by program name. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example: 
| | PROGRAM=(ABC*,D+F*,GHIJK, P6, P7) |
| PSB=(psbName,... psbName) | The variable represents a PSB name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by PSB name. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example: 
| | PSB=(ABC*,D+F*,GHIJK, PSB6, PSB7) |
| REPORTID=name | Each trace print must have a unique identification provided by REPORTID. This is the only required keyword. REPORTID is also used as the ddname of the output data set. The value can be up to eight characters long, and special characters are allowed. |
| REGION=(rgnName,... rgnName) | The variable represents a region name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by region name. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example: 
<p>| | REGION=(ABC*,D+F*,GHIJK, RGN6, RGN7) |</p>
<table>
<thead>
<tr>
<th>Keyword andOperand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE</td>
<td>RESPONSE&lt;nnnnnn</td>
</tr>
<tr>
<td>&gt;nnnnnn</td>
<td>=nnnnnn</td>
</tr>
<tr>
<td>RGNID=(nnn,...nnn)</td>
<td>The keyword selects only transactions from the specified region ID or IDs. Valid region IDs are 1 to 999. To specify multiple region IDs, separate each value with a comma. The specification can extend to multiple lines. For example: RGNID=(1,2,3,4,5,6,7)</td>
</tr>
<tr>
<td>STRAC=YES</td>
<td>NO</td>
</tr>
<tr>
<td>Keyword and Operand</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **TERM=(*ltcName, ... ltcName*)** | The variable represents an LTERM name, Tpipe name, or CICS terminal ID. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by LTERM name, tpipe name, or CICS terminal ID. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example:  
  
  **TERM=(ABC*, D+F*, GHIJK, CICST10, LTERM6, TPIPE7)**  
  
  Additionally, you can use the following keywords instead of specific or qualified names:  
  
  - **TPIPE**; transactions that came from a tpipe  
  - **APPC**; transactions that came from APPC  
  - **SYNCLOCK**; transactions that originated from systems synchronized to the local IMS clock, including the local system  
  - **MSCCLOCK**; nonlocal transactions only from systems synchronized to the local IMS clock  
  - **IMSCON**; transactions from IMS Connect as long as the BMC Energizer for IMS Connect product was installed with it  
  - **MQS**; transactions from WebSphere MQ  

| **TIME=hhmm | hhmm-hhmm** | The variable represents a start time or time period. The keyword selects a subset of the trace entries in the online trace buffer or trace log data set by a start time or time period.  
  
  When the start time is higher than the end time (for example, **TIME=2000-0300**), 24 hours are added.  

| **TITLE1=title** | The title value is centered on the first line of each page of the report. The value can be up to 60 characters long. If the **TITLE1** keyword is not included, the title is left blank on the report.  

| **TITLE2=title** | The secondary title is centered on the second line of each page of the report. The value can be up to 60 characters long. If the **TITLE2** keyword is not included, the secondary title is taken from the title specified when the trace was created.  

<table>
<thead>
<tr>
<th>Keyword and Operand</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACEID=\textit{id}</td>
<td>This keyword defines the ID of the trace that is to be matched in a search through the trace directory. All TLDS data sets that meet this requirement, plus any TARGET, TIME, and DATE requirements, are dynamically allocated and processed. To define a trace ID of blank, specify: TRACEID=\textit{BLANK}.</td>
</tr>
<tr>
<td>TRAN=\textit{(trnName,... trnName)}</td>
<td>The variable represents a transaction name. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by transaction name. You can use wildcard characters to qualify variables. The + character replaces any single character, and the * character replaces any number of characters at the end of the variable. To specify multiple variables, separate each variable with a comma. The specification can extend to multiple lines. For example: TRAN=\textit{(ABC*},D+F*,GHIJK,, TRN6,TRN7)</td>
</tr>
<tr>
<td>TY</td>
<td>TYPE=\textit{xxx}</td>
</tr>
<tr>
<td></td>
<td>■ BMP; batch message processing or Java batch message processing (JBP) region</td>
</tr>
<tr>
<td></td>
<td>■ CON; conversational MPP or JMP regions</td>
</tr>
<tr>
<td></td>
<td>■ DBT; DBCTL threads (CICS and ODBA)</td>
</tr>
<tr>
<td></td>
<td>■ FPU; Fast Path utility regions</td>
</tr>
<tr>
<td></td>
<td>■ MDP; Fast Path message-driven regions</td>
</tr>
<tr>
<td></td>
<td>■ MPP; message processing or Java message processing (JMP) regions</td>
</tr>
<tr>
<td></td>
<td>■ NDP; Fast Path non-message-driven regions</td>
</tr>
<tr>
<td></td>
<td>■ NOTDBT; exclude DBCTL threads</td>
</tr>
<tr>
<td></td>
<td>■ TPI; message processing regions currently executing an explicit CPI-C program</td>
</tr>
<tr>
<td>Keyword and Operand</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>TRANTYPE=xxx</td>
<td>The variable represents a transaction type. The keyword selects a subset of the trace entries in the online trace storage buffer or trace log data set by transaction type. Replace the variable with one of the following transaction types:</td>
</tr>
<tr>
<td></td>
<td>■ DLI; all DL/I transactions</td>
</tr>
<tr>
<td></td>
<td>■ DB2; all DB2 transactions</td>
</tr>
<tr>
<td></td>
<td>■ FP; all Fast Path transactions</td>
</tr>
<tr>
<td></td>
<td>■ ALL; all types of transactions</td>
</tr>
<tr>
<td>US</td>
<td>USER=(id,... id)</td>
</tr>
<tr>
<td></td>
<td>USER=(ABC*,D+F*,GHIJK,USER6,USER7)</td>
</tr>
</tbody>
</table>

**Start and stop the trace directory**

At times, you may need to stop and start the trace directory.

The History Trace view (HT) provides commands to do so.

**Stop the trace directory**

Use the STOPDIR primary command on the HT view to close and deallocate the trace directory. Active trace logging continues. All history trace commands except STARTDIR are disabled and a new trace logging request cannot be initiated. A trace directory is required for trace logging to occur.

**Start the trace directory**

Use the STARTDIR primary command on the HT view to reallocate the trace directory and open it with a disposition of old. If the STARTDIR command is successful, all history trace commands are re-enabled and new trace logging requests can be initiated. If the STARTDIR command is not successful, all other history trace commands remain disabled and trace logging cannot be initiated.
Monitor IMS workloads and resources

You can request the workload monitor and resource monitor services and view information about monitor activities.

See the following topics for more information:

- “About monitor services” on page 147
- “Request a monitor service” on page 154
- “View monitor information” on page 160
- “Monitor administration” on page 166
- “IMS workload monitors” on page 175
- “IMS resource monitors” on page 177

About monitor services

Monitors are services that collect data measurements about resource usage or workload performance and detect warning conditions in response to a user request.

Each monitor service is a timer-driven monitor that:

- Measures resource or workload status, count of activity, or usage percentage
- Calculates a ratio of resource usage over time
- Detects warning conditions and issues messages

The measurement obtained at each sampling interval is compared to the user-defined threshold for that request. The threshold comparison detects conditions for which user-defined warning messages can be issued. The measurements are stored
online so that a plot of the recent history of a monitor request can be viewed at any
time. Optional service parameters narrow the scope of a single request and allow
several requests for the same monitor service to be active concurrently.

Types of monitor services

Workload and resource monitor services are available.

Workload monitor services

The following workload monitor services are available:

- Global region call monitors provide performance data about all region calls that
  are issued during IMS application program processing.

- Elapsed timing monitors measure the transaction input queue time, elapsed
  transaction execution time, and transaction response time.

- Transaction monitors measure the number of transactions that are processed by
  IMS.

For more information about the workload monitor services, see “IMS workload
monitors” on page 175.

Resource monitor services

The following resource monitor services are available:

- Scheduling services measure transaction arrivals and transactions that are
  processed.

- Dependent region services measure database and message queue access by
  programs that are executing in the dependent regions.

- Database services measure the DL/I buffer pool activity.

- IMS internals services measure IMS internal activity for program isolation, pools,
  logging, latching, and pool allocation.

- IMS interaction services measure the operating system resources that are used by
  IMS interaction with the operating system.
IRLM services measure critical IRLM activity when IMS IRLM is used.

For more information about the resource monitor services, see “IMS resource monitors” on page 177.

Data types measured

The following types of automatic service measurements can be taken periodically and viewed by hyperlinking to the monitor’s plot view:

- **COUNT**
  An activity count over time (for example, the number of lock requests within a specified time interval). When COUNT data is plotted, in addition to the counts, rates-per-second are calculated automatically and shown for the displayed time intervals (AVG/SEC).

- **AVERAGE**
  The quantity over time (for example, the average value of transaction response time in the specified interval). When AVERAGE data is plotted, in addition to the averages, the event counts used to calculate the averages are also shown for the displayed time intervals (EVENTS). For example, for the plotted average response time, the number of transactions measured is shown.

- **STATUS**
  The status level at the moment of measurement (for example, queue lengths or level of PI enqueues)

- **PERCENT**
  The resource usage at the moment of measurement, expressed as a percentage of the maximum (for example, percent pool utilization)

- **WARNING ONLY**
  WARNING ONLY is a condition measurement that can be checked against a warning threshold (for example, the number of DL/I calls performed in a region since the last program scheduling). This measurement does not produce a plot.

How data is measured

All monitor services, except the global region call monitors, measure data from the transaction records passed to the PAS from the Event Collector at transaction completion (sync point).
The transaction records contain an identification of the specific transaction, timestamps, elapsed timings, and activity indicators. The many identification fields allow flexible workload selections by transaction, program, PSB, region, class, LTERM, user ID, program type, and transaction type.

**Note**

If the SAPEXIT is installed as described in the *MainView for IMS and MainView for DBCTL Customization Guide*, the SAP identifier replaces the IMS transaction code in the transaction records. The replacement allows the monitors to collect data based on the SAP identifier instead of the transaction code.

The data collected by the monitors is affected by the following situations:

- Data items from the transaction records are posted only at transaction completion (sync point). All transactions that are completed within a requested monitor sampling interval are included in the value that is calculated for that interval. For example, a program currently in a loop does not show up immediately in an increased measured response time. (The transaction is not completed and, therefore, cannot be posted.)

- To provide valid averages per transaction, monitors collecting Fast Path activity collect data only from transactions that made at least one Fast Path call. Monitors collecting DB2 activity collect data only from transactions that made at least one DB2 call.

- To calculate meaningful values over time, only response-type transactions are evaluated, which are those running in MPP (message processing program) regions, in JMP (Java message processing program) regions, in MDP (Fast Path message-driven program) regions, or under DBCTL threads. BMP and JBP transactions are not measured by these monitors because they would skew the results.

For example, the average elapsed time of 100 MPP transactions is measured at one second. If a BMP transaction that ran for two hours (7200 seconds) were included with the MPP transactions, the average elapsed time would be 72.3 seconds. The same is true of counts, such as DB2 calls. If DB2 calls were made by this BMP transaction, the calls would be posted only when the BMP transaction is completed even though they occur throughout the two-hour life of the transaction.

To avoid this skewing problem and to provide measures of total system activity, other monitor services measure call activity as it occurs in the regions. These services, described in “Global region calls monitors” on page 175, are global services because they can measure MPP, JMP, BMP, JBP, and DBCTL workloads and do not require that a transaction be completed before its effects can be seen.
Warning conditions

When requesting a monitor service, you can define a value that is compared to the measurement taken during the requested sampling interval.

The comparison establishes a warning condition when the measurement either exceeds a maximum threshold or is less than a minimum threshold.

When the monitor service detects an exception, it automatically sends a message to the PAS journal and to the system console upon user request. The message text contains the following elements:

- A unique message ID
- The title of the service
- The measured value
- The sampling interval (if applicable)
- The defined threshold

The monitor service sends an exception-cleared message with the service title to the PAS Journal when the service no longer detects a warning condition.

When you start a monitor service you can specify the following options:

- A user-defined threshold value
  Each new measurement of the system variable made at the expiration of an interval is compared to the threshold value.
  When the measurement either exceeds a maximum threshold or is less than a minimum threshold, a warning condition exists and warning messages are sent automatically to the PAS journal log.

- To send warning messages to the operating system console through the write-to-operator (WTO) facility in addition to the PAS journal

- The number of warnings to be sent for one exception condition, the number of times the exception is detected before the first message, and the number of times the exception is detected between messages

You can specify these options to prevent situations where a condition often varies just above and below the threshold, triggering many messages. For example, a condition could be checked every 30 seconds with a warning only if that condition persists for 3 minutes, a repeated warning only after another 5 minutes, and a limit of 10 warnings.
Monitor request title

A monitor request is identified with a title.

The title for each request is shown in the:

- Plot view of the data collected by the requested monitor
- AT, MONACTV, SM, MONSERV, MONSUMM, and MONWARN views
- Warning message that is issued when the measurement of the resource exceeds a threshold defined for the monitor

If a parameter is specified for a requested monitor, the parameter is shown with the title. If a parameter is not used for the monitor request, the plot view and the warning message show the default (TOTAL) instead.

Each monitor service has a default title that can be customized. This process is described in the MainView for IMS and MainView for DBCTL Customization Guide. The default titles of all the monitor services are included in the service descriptions in this manual.

When requesting a monitor service, you can specify a a title to make it more meaningful. A user-defined title can be up to 24 characters long. You can define the title when you request a monitor.

Warning message format

Each monitor service has a unique warning message associated with it. A warning message is issued when a warning condition:

- Is detected; see “Warning condition detected” on page 152
- No longer exists; see “Warning condition no longer exists” on page 153

Warning condition detected

The following format is used for warning messages when a warning condition is detected:

```
ccnnn0W (nn) hh:mm:ss title (parm) = v [IN x intrvl] (>thrshld) *****
```
### Variable Description

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
</table>
| ccnnn0W  | Warning message ID issued by the requested monitor service. The variable:  
- **cc** is a two-character code indicating the service type (for example, RM indicates Resource Monitor)  
- **nnn** is a numerical message identifier associated with the requested service  
0 indications that the detected threshold currently exists. **W** is a warning message indicator. |
| (nn)     | Number of times the warning message was issued |
| hh:mm:ssss | Timestamp in hours, minutes, and seconds |
| title    | Title for the service (See “Monitor request title” on page 152.) |
| (parm)   | Optional parameter that was specified when the request was made |
| v        | Current measured value |
| IN x intrvl | Time specified for the resource sampling. The variable:  
- **x** is **nn**, **nnnn**, **hh:mm:ssss**, or **mm:ssss** (*n* is a numeric value, **hh** is the number of hours, **mm** is the number of minutes; and **ssss** is the number of seconds)  
- **intrvl** is units of time measurement, either SEC or MIN  
This measurement is included in the warning message only when a COUNT data type is measured. (See “Data types measured” on page 149.)  
**Note:** Time measurement units are not used for **hh:mm:ss**. |
| (>thrshld) | Threshold value specified when the monitor service request was made  
A less-than character (>) character indicates the sampled value is less than or equal to the threshold as specified by the request. |
| *****    | Emphasizes the message in the PAS journal log |

---

**Warning condition no longer exists**

The following format is used for warning messages when the condition that caused the warning no longer exists:
Request a monitor service

When you request a monitor service, a data entry dialog is opened. On the data entry dialog you specify the following information:

- Parameter for the service
- Time interval between successive monitor service invocations
- Start, stop, and quiesce information
- When and where warning messages are issued
- Warning threshold
- Title
- Plot range
- Workload qualifiers

Methods for requesting a monitor service

A monitor service can be requested in several ways:
Select a monitor service on the Start Monitors (SM or MONSERV) view. (See “Making a monitor service request” on page 155.)

Replicate an active monitor request. (See “Replicating a monitor service request” on page 157.)

Issue a SET service request. (See “Issuing a SET service request” on page 159.)

Start a monitor service from BBPARM with other service requests.
Define a series of SET requests as a member of your PAS BBPARM data set that can be started automatically when the system starts or at your request.

Start a monitor service from a MainView AutoOPERATOR EXEC.
Write an EXEC that starts a monitor service.
Use the IMFEXEC IMFC command followed by the service name, optional parameters, and an identifier for the target system; for example:

```
IMFEXEC IMFC SET REQ=DBTOT I=00:06:00 TARGET=PROD1
```

Making a monitor service request

Perform the following tasks to request a monitor service:

1. Type **SM** or **MONSERV** on the COMMAND line of any view and press **Enter**.

The Start Monitors (SM or MONSERV) view is displayed, as shown in Figure 90 on page 156. The Start Monitors view lists all available monitors.

To learn about a monitor service, in the **CMD** field next to the service, type **H** and press **Enter**. A description of the service, its parameters, and the syntax of its warning message are displayed. A brief description of the monitors is in “IMS workload monitors” on page 175 and “IMS resource monitors” on page 177.
To learn about a field on the Start Monitors view, position the cursor on the field and press the **Help** key.

### Figure 90: Start Monitors view (SM or MONSERV)

<table>
<thead>
<tr>
<th>Command</th>
<th>SCROLL</th>
<th>CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONSERV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Monitor Services**
  - Commands: BLK (Requests) JOURNAL (Log Display)
  - Line CMDs: S (Select), L (Lock), U (Unlock), H (Help)

<table>
<thead>
<tr>
<th>CMD Service</th>
<th>Num</th>
<th>Title</th>
<th>Parm Type</th>
<th>Area</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>$CBMP</td>
<td></td>
<td>TOTAL BMP CALLS</td>
<td>(IDENTIFIER)</td>
<td>IWGBL</td>
<td></td>
</tr>
<tr>
<td>$CDBT</td>
<td></td>
<td>TOTAL DBT (CICS) CALLS</td>
<td>(IDENTIFIER)</td>
<td>IWGBL</td>
<td></td>
</tr>
<tr>
<td>$CMPP</td>
<td></td>
<td>TOTAL MPP CALLS</td>
<td>(IDENTIFIER)</td>
<td>IWGBL</td>
<td></td>
</tr>
<tr>
<td>$CTOT</td>
<td></td>
<td>TOTAL PROGRAM CALLS</td>
<td>(IDENTIFIER)</td>
<td>IWGBL</td>
<td></td>
</tr>
<tr>
<td>$DB2</td>
<td></td>
<td>DB2 DATABASE CALLS</td>
<td>(IDENTIFIER)</td>
<td>IWDB2</td>
<td></td>
</tr>
<tr>
<td>$DCIC</td>
<td></td>
<td>CI CONTENTIONS</td>
<td>(IDENTIFIER)</td>
<td>IWFP</td>
<td></td>
</tr>
<tr>
<td>$DOWA</td>
<td></td>
<td>OVERFLOW BUFFER WAITS</td>
<td>(IDENTIFIER)</td>
<td>IWFP</td>
<td></td>
</tr>
<tr>
<td>$ERAB</td>
<td></td>
<td>TRANS PROCESSED</td>
<td>(IDENTIFIER)</td>
<td>IWFP</td>
<td></td>
</tr>
<tr>
<td>$ERAB</td>
<td></td>
<td>DB2 SPECIAL CALLS</td>
<td>(IDENTIFIER)</td>
<td>IWDB2</td>
<td></td>
</tr>
<tr>
<td>$CRSP</td>
<td></td>
<td>AVG IMS CONNECT RESPONSE</td>
<td>(IDENTIFIER)</td>
<td>IWTRN</td>
<td></td>
</tr>
<tr>
<td>$ELAP</td>
<td></td>
<td>AVG ELAPSED TIME</td>
<td>(IDENTIFIER)</td>
<td>IWTRN</td>
<td></td>
</tr>
<tr>
<td>$INP</td>
<td></td>
<td>AVG INPUT Q TIME</td>
<td>(IDENTIFIER)</td>
<td>IWTRN</td>
<td></td>
</tr>
</tbody>
</table>

- F1=HELP, F2=SPLIT, F3=END, F4=RETURN, F5=RFIND, F6=RCHANGE, F7=UP, F8=DOWN, F9=SWAP, F10=LEFT, F11=RIGHT, F12=RETRIEVE

2. In the **CMD** field next to the service that you want to start, type **S** and press **Enter**.

The Start Workload Monitor dialog is displayed, as shown in **Figure 91 on page 156**.

Depending on the type of monitor service selected (see “Types of monitor services” on page 148), the Specify Workload Selections section might not be shown and the exact workload selection fields listed will vary.

### Figure 91: Start Workload Monitor dialog

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SCROLL</th>
<th>CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>$CBMP - TOTAL BMP CALLS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Monitor Attributes:**
- **PARK** (Identifier)
- **INTERVAL** 00:01:00 (hh:mm:ss)
- **WWAL** (Warning value)
- **WMSS** (Log warnings to)
- **WLIM** 10 (Warnings limit)
- **TITLE**
- **PLOTMAX** (Maximum PLOT X-Axis value)
- **RANGES** (1-4 Range Distr. Upper Limits)
- **LOG** (NO, ATSTOP, ATPD, ATINTVL, ATWARN)

**Specify Workload Selections:**
- **CALLYPE** (ALL, MSG, DB2, DLI)

**ENTER** to process the request
**END** to cancel the request
**HELP** to display related help
3 Specify the monitor service criteria.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARM</td>
<td>Unique name for the request</td>
<td>Blanks</td>
</tr>
<tr>
<td>START</td>
<td>When to start the monitor service</td>
<td>Next full minute</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>Time interval between successive service invocations</td>
<td>Not applicable</td>
</tr>
<tr>
<td>STOP</td>
<td>When to stop the monitor service</td>
<td>24 hours</td>
</tr>
<tr>
<td>WVAL</td>
<td>Warning threshold for the monitor request</td>
<td>0, no warnings</td>
</tr>
<tr>
<td>WIF</td>
<td>Number of intervals before the first warning message</td>
<td>1</td>
</tr>
<tr>
<td>WMSG</td>
<td>Where the warning messages are to be sent</td>
<td>LOG</td>
</tr>
<tr>
<td>WIN</td>
<td>Number of intervals between warning messages</td>
<td>1</td>
</tr>
<tr>
<td>WLIM</td>
<td>Maximum number of warning messages</td>
<td>10</td>
</tr>
<tr>
<td>RST</td>
<td>Restart option to be used when a service is quiesced because of an inactive target region</td>
<td>HOT</td>
</tr>
<tr>
<td>QIS</td>
<td>Action to be taken when an IMS target is not active</td>
<td>YES</td>
</tr>
<tr>
<td>TITLE</td>
<td>Display title for the monitor service (see “Monitor request title” on page 152)</td>
<td>Name of the service</td>
</tr>
<tr>
<td>PLOTMAX</td>
<td>Maximum value to be shown on X-axis boundary for a PLOT of this monitor request.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>RANGES</td>
<td>One to four upper-range limit values for the PLOT range distribution</td>
<td>No range</td>
</tr>
<tr>
<td>LOG</td>
<td>Logging option specification for the monitor service</td>
<td>No logging</td>
</tr>
<tr>
<td>Specify Workload Selections</td>
<td>Criteria used to limit or filter monitor data collection to a specific part of the IMS workload</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

For additional information about a field, press F1 for online Help.

4 Press Enter.

The service monitor request is started.

**Replicating a monitor service request**

Perform the following tasks to replicate a monitor service:
1 Type AT or MONACTV on the COMMAND line of any view and press Enter.

The Active Monitors (AT or MONACTV) view is displayed, as shown in the following figure.

To learn about a monitor service, in the CM field next to the service, type H and press Enter. A description of the service, its parameters, and the syntax of its warning message are displayed. A brief description of the monitors is in “IMS workload monitors” on page 175 and “IMS resource monitors” on page 177.

To learn about a field on the Active Monitors view, position the cursor on the field and press the Help key.

Figure 92: Active Monitors view (AT or MONACTV)

2 In the CM field of the request whose values you want to copy, type R and press Enter.

The Replicate Workload Monitor dialog is displayed, as shown in the following figure, with the values from the copied request duplicated in the dialog.

Figure 93: Replicate Workload Monitor dialog
3  *(optional)* Adjust the values as needed.

To change a value, type over it.

For additional information about a field, press F1 for online Help.

4  Press **Enter**.

The monitor service request is started and the Active Monitors (AT or MONACTV) view is displayed with the new request listed.

---

**Issuing a SET service request**

Perform the following tasks to issue a SET service request:

1  Type **SM** or **MONSERV** on the COMMAND line of any view and press **Enter**.

   The Start Monitors (SM or MONSERV) view is displayed, which lists all available monitors.

   To learn about a monitor service, in the **CMD** field next to the service, type **H** and press **Enter**. A description of the service, its parameters, and the syntax of its warning message are displayed. A brief description of the monitors is in “IMS workload monitors” on page 175 and “IMS resource monitors” on page 177.

   To learn about a field on the Start Monitors view, position the cursor on the field and press the Help key.

2  Type **BLK** on the COMMAND line of and press **Enter**.

   The Issue SET Service Requests dialog is displayed, as shown in Figure 94 on page 160.
The Target field displays the name of the current target context for which the SET service requests will be processed.

**Figure 94: Issue SET Service Requests dialog**

```
<table>
<thead>
<tr>
<th>COMMAND ====&gt;</th>
<th>Issue SET Service Requests</th>
<th>SCROLL ===&gt; CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>I11Z</td>
<td></td>
</tr>
<tr>
<td>Start AUTOBLK</td>
<td>(BBIPARM member containing the timer requests)</td>
<td></td>
</tr>
<tr>
<td>Timer Request</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

ENTER to process the request
END to cancel the request
HELP to view related help

3 Specify the following information:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start AUTOBLK</td>
<td>Issues special BLK requests or monitor service requests that are predefined in the BBPARM data set. These are also referred to as auto block members.</td>
</tr>
<tr>
<td>Timer Request</td>
<td>Allows for the specification of a monitor service request that needs to be started. For example: <code>REQ=RESP TEST, WVAL=0.05, TRAN=AB*</code></td>
</tr>
</tbody>
</table>

For additional information about a field, press F1 for online Help. For more information about using SET requests, see the *MainView for IMS Online Analyzers, Monitors, and Traces Reference Manual*.

4 Press Enter.

The service monitor request is started.

**View monitor information**

Once a monitor is active, you can use the following monitor views to view monitor information:

- “Monitor Overview view (ISERV)” on page 162
Tip
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Access monitor views

You can access a monitor view in the following ways:

- Enter the view name on the COMMAND line of any view.
- Enter VIEWS on the COMMAND line of any view and selecting the view from the VIEWS list.
- Select monitor options on EZ menus.

For information about hyperlinking to the monitor views, see the sections that describe the views.

Monitors by Target Summary view (IMON)

The Monitors by Target Summary view (IMON) summarizes the number of monitors started for each target, shows how many of the monitors are in a warning condition, and provides warning values.
Monitor Overview view (ISERV)

The Monitor Overview view (ISERV) lists each monitor that is collecting data from active IMS targets in the current context.

Monitors are ranked by their reported average percentage of warning threshold over the current interval. Average percentage of warning measures how close the reported data is to the warning threshold set for the monitor that collects the data.

You can hyperlink to the ISERV view from the:

- **Target** or **Actv Mntrs** fields in the IMON view
- **Area** and **Serv** fields in the IMAREAZ view
- **Serv** field in the ISOVER view

Monitors by Monitor Type view (ISOVER)

The Monitors by Monitor Type view (ISOVER) provides a performance summary of monitors that are collecting data from active IMS targets in the current context.
Data from similar monitors are combined and then ranked by the average percentage of warning threshold calculated for the current interval. Average percentage of warning measures how close the reported data is to the warning threshold set for the monitor that collects the data.

Figure 97: Monitors by Monitor Type view (ISOVER)

<table>
<thead>
<tr>
<th>Serv</th>
<th>Parm</th>
<th>Avg % Warning</th>
<th>Avg</th>
<th>Warn</th>
<th>Value</th>
<th>Montrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBHIT</td>
<td>92</td>
<td>92.0000</td>
<td>64.6580</td>
<td>80.0000</td>
<td>Minimum DB</td>
<td>1</td>
</tr>
<tr>
<td>VHIT</td>
<td>91</td>
<td>91.0000</td>
<td>70.5345</td>
<td>80.0000</td>
<td>Minimum DB</td>
<td>1</td>
</tr>
<tr>
<td>ECSAU</td>
<td>83</td>
<td>83.0000</td>
<td>71.0000</td>
<td>85.0000</td>
<td>Maximum IMVS</td>
<td>1</td>
</tr>
<tr>
<td>LGMSG</td>
<td>29</td>
<td>29.0000</td>
<td>12.7100</td>
<td>75.0000</td>
<td>Maximum QUEUE</td>
<td>1</td>
</tr>
<tr>
<td>PSBP</td>
<td>14</td>
<td>14.0000</td>
<td>12.0000</td>
<td>85.0000</td>
<td>Maximum INTNL</td>
<td>1</td>
</tr>
<tr>
<td>PSBW</td>
<td>8</td>
<td>8.0000</td>
<td>7.0000</td>
<td>85.0000</td>
<td>Maximum INTNL</td>
<td>1</td>
</tr>
<tr>
<td>@RESP FAST</td>
<td>2</td>
<td>2.0000</td>
<td>0.0276</td>
<td>1.0000</td>
<td>Maximum IWTRN</td>
<td>1</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Monitors by Target Area view (IMAREAZ)

The Monitors by Target Area view (IMAREAZ) summarizes the number of monitors by target area and shows their status.

Figure 98: Monitors by Target Area view (IMAREAZ)

<table>
<thead>
<tr>
<th>Target</th>
<th>Area</th>
<th>Nbr</th>
<th>% Warning</th>
<th>Avg Mon</th>
<th>Avg Warn</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSxxx</td>
<td>IWDB</td>
<td>3</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSxxx</td>
<td>IWFP</td>
<td>3</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSxxx</td>
<td>IWTR</td>
<td>9</td>
<td>64.8</td>
<td>64.7990</td>
<td>1.4444</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>SCHE</td>
<td>9</td>
<td>64.8</td>
<td>441.3333</td>
<td>133.3333</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>IMVS</td>
<td>6</td>
<td>61.2</td>
<td>442.3333</td>
<td>1.1K</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>DB</td>
<td>10</td>
<td>52.3</td>
<td>77.7158</td>
<td>75.0000</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>INTN</td>
<td>19</td>
<td>5.6</td>
<td>29.3K</td>
<td>13.4737</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>QUEU</td>
<td>20</td>
<td>17.5</td>
<td>213.9000</td>
<td>48.5000</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>REGN</td>
<td>5</td>
<td>0.0000</td>
<td>0.0000</td>
<td>21.0000</td>
</tr>
<tr>
<td>IMSxxx</td>
<td>LOCK</td>
<td>5</td>
<td>289.2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSxxx</td>
<td>MFS</td>
<td>3</td>
<td>1.1K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSxxx</td>
<td>IWGB</td>
<td>4</td>
<td>675.5000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Monitor Summary view (IMSUM)

The Monitor Summary view (IMSUM) provides a summary of all active monitors by monitor name for each target in the view context.

**Figure 99: Monitor Summary view (IMSUM)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$CBMP</td>
<td>0.0000</td>
<td>0</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>$CDBT</td>
<td>0.0000</td>
<td>0</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>#CDB2</td>
<td>0.0000</td>
<td>0</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Monitor Requests Summary view (MONSUMM)

The Monitor Requests Summary view (MONSUMM) displays the current status of all active monitors.

It shows each request, the current sampling, the defined threshold, and a graphic summary of all the current measured values compared to defined thresholds. The view also displays the status of the PAS and the Event Collector.

**Figure 100: Monitor Requests Summary view (MONSUMM)**

<table>
<thead>
<tr>
<th>Requests</th>
<th>Parm</th>
<th>Monitor Warning</th>
<th>Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL BMP CALLS</td>
<td>0.0000</td>
<td>1.0000</td>
<td>W</td>
</tr>
<tr>
<td>TOTAL BMP CALLS</td>
<td>933.0</td>
<td>1.0000</td>
<td>W</td>
</tr>
<tr>
<td>TOTAL PROGRAM CALLS</td>
<td>933.0</td>
<td>1.0000</td>
<td>W</td>
</tr>
<tr>
<td>DB2 DATABASE CALLS</td>
<td>0.0000</td>
<td>1.0000</td>
<td>W</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Monitors in Warning view (IMWARN)

The Monitors in Warning view (IMWARN) displays only monitors that are in a warning condition, and it shows the defined threshold for each target.

Figure 101: Monitors in Warning view (IMWARN)

<table>
<thead>
<tr>
<th>Serv Parm</th>
<th>Value</th>
<th>Type</th>
<th>Area</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPHIT</td>
<td>180.0</td>
<td>Minimum</td>
<td>DB</td>
<td>I7XIMS</td>
</tr>
<tr>
<td>OQLT</td>
<td>111.8</td>
<td>Maximum</td>
<td>QUEUE</td>
<td>I7XIMS</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Monitor Warnings Summary view (MONWARN)

The Monitor Warnings Summary view (MONWARN) displays the current status of all monitors that are in a warning condition.

It shows each request, the current sampling, the defined threshold, and a graphic summary of all the current measured values compared to defined thresholds. The view also displays the status of the PAS and the Event Collector.

Figure 102: Monitor Warnings Summary view (MONWARN)

<table>
<thead>
<tr>
<th>Requests</th>
<th>Parm</th>
<th>Monitor Warning</th>
<th>Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL BMP CALLS</td>
<td>933.0</td>
<td>1.0000</td>
<td>Interval</td>
</tr>
<tr>
<td>TOTAL PROGRAM CALLS</td>
<td>933.0</td>
<td>1.0000</td>
<td>W</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Plot views for monitors

When you select a monitor from the AT, MONACTV, ISERV, IMSUM, MONSUMM, IMWARN, or MONWARN view, a plot of the data collected by the selected monitor is displayed.
Figure 103: CSA Utilization Monitor view (ICSAUT)

```
15APR2007 12:46:44 ------ MainView WINDOW INTERFACE (V4.2.03) --------
COMMAND ===> SCROLL ===> DATA
CURR WIN ===> 1 ALT WIN ===>
>W1 =ISERV====IECSAU===IMSxxx===*========15APR2007==10:47:37====MVIMS====D====1
ECSAU    ECSA % UTILIZATION                      Parm....
RS        |.............|..............|  Percent Target.. IMSxxx
10:47:00  *************************         72.00
10:46:00  *************************         72.00 Samples. 241
10:45:00  *************************         72.00 Samp Int 00:01:00
10:44:00  *************************         72.00 Period.. 00:10:00
10:43:00  **************************        73.00
10:42:00  *************************         72.00 Start... 06:46:00
10:41:00  *************************         72.00 Elapsed. 04:01:37
10:40:00  *************************         72.00
10:39:00  *************************         72.00
|.............|..............|
Curr Pd   *************************         72.20 Max/Min. 73.00
Prev Pd   *************************         72.10 at. 10:29:00
Total     **********************            61.05
|.............|..............|
Warn Val  ******************************    85.00          MAX
Plot Max ===> 85.00
```

Each plot has a hyperlink to a corresponding view or service of the MainView for IMS product that you can use for detailed analysis of your target’s performance. The hyperlink field is directly below the monitor name in the upper left corner of the view. The hyperlink in CSA Utilization Monitor view (ICSAUT) accesses the Real Storage Statistics (IRS) view.

Monitor administration

The following views are used to perform administrative functions for monitor service requests:

- PAS Information (PASINFO) view; see “PAS Information view (PASINFO)” on page 166
- Active Monitors (AT or MONACTV) view; see “Active Monitors view (AT or MONACTV)” on page 170
- Start Monitors (SM or MONSERV) view; see “Start Monitors view” on page 171

PAS Information view (PASINFO)

The PAS Information (PASINFO) view provides general information about the product address space (PAS) and the target.

It also shows information about traces and timers, including status information, some statistics, default parameters that are in effect, and a summary of the active
The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS ID</td>
<td>List of targets from which to select to change the context</td>
</tr>
<tr>
<td>CAS ID</td>
<td>CASINFO view, where you can obtain detailed information about the CAS, and the availability of services to perform functions</td>
</tr>
<tr>
<td>Target</td>
<td>Active Monitors view (AT or MONACTV) for that target, which displays the list of monitors that have been started for the target</td>
</tr>
<tr>
<td>Active</td>
<td>Active Monitors view (AT or MONACTV) for that target, which displays the list of monitors that have been started for the target</td>
</tr>
<tr>
<td>Other highlighted fields</td>
<td>Monitor Overview (ISERV) view, to show monitors with the status indicated by the field header</td>
</tr>
</tbody>
</table>
The PASPARM view displays the actively installed parameter members, and their data set name, for a MainView product running in the BBI-SS PAS. You can perform some administrative functions on the listed members.

You can display the view by entering PASPARM on the COMMAND line.

Usage notes

PASPARM displays the default list of parameter members used. These are distributed as a BBPARM member that contains parameter member names, edit rules, and default descriptions.

The following table describes the fields in the PASPARM view:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern</td>
<td>Allows you to specify a generic value to see selective members contained in the BBIPARM data sets</td>
</tr>
<tr>
<td></td>
<td>The view can display up to 100 members in target mode, and up to 20 members for each target in SSI mode.</td>
</tr>
<tr>
<td>Name</td>
<td>Displays the product parameter members found in the BBIPARM data set</td>
</tr>
<tr>
<td></td>
<td>A member name is displayed in green if it is active in the PAS.</td>
</tr>
<tr>
<td></td>
<td>Using SSI mode allows for comparing the configuration members of multiple PASs.</td>
</tr>
<tr>
<td>Description</td>
<td>Displays the description that the product uses for the member</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> An exception is if the first three lines of the member contain the word DESCRIPTION, TITLE or PURPOSE. In that case, the description consists of the next 50 bytes of information following the word.</td>
</tr>
</tbody>
</table>
### Dataset Name

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dataset Name</td>
<td>Displays the name of the data set in the BBIPARM concatenation that contains the member Members edited from this view are always saved in the first data set in the BBIPARM concatenation. These members might not reflect the data set name of the actively deployed parameter member until the PAS is recycled.</td>
</tr>
</tbody>
</table>

### Actions

The PASPARM view supports the following line-command actions:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V (View)</td>
<td>View a member with the ISPF or MainView Explorer VIEW interface.</td>
</tr>
<tr>
<td>E (Edit)</td>
<td>Edit a member with the ISPF or MainView Explorer EDIT interface. Each product determines which members can be edited.</td>
</tr>
<tr>
<td>S (Select)</td>
<td>Display the contents of a member in a product view when available, or display the contents of the member in an ISPF VIEW or EDIT mode.</td>
</tr>
<tr>
<td>I (Install)</td>
<td>Activate the member in the BBI-SS PAS by invoking a specific product's assist routine that reverts the modified member. This feature is not available for parameter members that require restarting the PAS.</td>
</tr>
</tbody>
</table>

### Hyperlinks

The PASPARM view supports hyperlinks from the BBPARM member names to display additional information:

<table>
<thead>
<tr>
<th>Hyperlink from BBPARM member</th>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBISSPxx</td>
<td>ISPF view</td>
<td>Displays the BBISSPxx parameters using ISPF view</td>
</tr>
<tr>
<td>BBIISPxx</td>
<td>ISPF view</td>
<td>Displays the BBIISPxx parameters using ISPF view</td>
</tr>
<tr>
<td>BBIJNTxx</td>
<td>ISPF view</td>
<td>Displays Job Name Table entries using ISPF view</td>
</tr>
<tr>
<td>BBINODxx</td>
<td>ISPF view</td>
<td>Displays the Node Table entries using ISPF view</td>
</tr>
<tr>
<td>BBIXSPxx</td>
<td>ISPF view</td>
<td>Displays the XS Communications definitions using ISPF view</td>
</tr>
<tr>
<td>BBFTWKxx</td>
<td>IWKLDDEF</td>
<td>Displays workload definitions</td>
</tr>
<tr>
<td>CFGssidA</td>
<td>ISPF view</td>
<td>Displays the BBI-SS Configuration Dataset using ISPF view</td>
</tr>
<tr>
<td>IMFBEXxx</td>
<td>IBEXSUMR</td>
<td>Displays Trace/Misc Parameters</td>
</tr>
<tr>
<td>IMFECPPxx</td>
<td>IECPSUMR</td>
<td>Displays the Event Collector Parameters</td>
</tr>
</tbody>
</table>
Active Monitors view (AT or MONACTV)

The Active Monitors view (AT or MONACTV) displays all active monitor service requests in a PAS.

Use the AT or MONACTV view to:

- View a list of active monitor requests
- Display a plot of the data collected by the selected monitor; see “Display a plot view for a monitor” on page 171
- View the options and attributes used to start the monitor service request; see “View request options and attributes” on page 171
- Modify certain options and attributes for a monitor service request; see “Modify request options and attributes” on page 172
- Purge a monitor service request; see “Purge a monitor service request” on page 173
- Replicate a monitor service request; see “Replicating a monitor service request” on page 157
- Stop a monitor service request; see “Stop a monitor service request” on page 174
- Learn about monitor services; see “Learn about monitor services” on page 175

The following hyperlinks are provided in the AT or MONACTV view:

<table>
<thead>
<tr>
<th>Hyperlink from BBPARM member</th>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMFSYSxx</td>
<td>ISPF view</td>
<td>Displays Component Init Parameters using ISPF view</td>
</tr>
</tbody>
</table>
Start Monitors view

The Start Monitors view (SM or MONSERV) displays all monitor services that are available.

Use the SM or MONSERV view to:

- View a list of monitor services
- Request a monitor service; see “Making a monitor service request” on page 155
- Lock a monitor service; see “Lock a monitor service” on page 174
- Unlock a monitor service; see “Unlock a monitor service” on page 174
- Learn about monitor services; see “Learn about monitor services” on page 175

The following hyperlinks are provided in the SM or MONSERV view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num Actv</td>
<td>Active Monitors (AT or MONACTV) view</td>
</tr>
<tr>
<td>BLK</td>
<td>Issue SET Service Requests dialog</td>
</tr>
<tr>
<td>JOURNAL</td>
<td>PAS journal</td>
</tr>
</tbody>
</table>

Display a plot view for a monitor

Use the S (Select) line command to display a plot view for a monitor.

For more information about plot views, see “Plot views for monitors” on page 165.

View request options and attributes

Use the W (Show) line command to display the options and attributes that were specified to request the selected monitor service.
The Show Workload Monitor dialog is displayed. You cannot change any of the displayed information.

**Figure 106: Show Workload Monitor dialog**

Modify request options and attributes

Use the M (Modify) line command to change the options and attributes for the selected monitor service request.

The Modify Workload Monitor dialog is displayed, as shown in Figure 107 on page 173.
You can change highlighted information. For additional information, see “Making a monitor service request” on page 155.

**Figure 107: Modify Workload Monitor dialog**

<table>
<thead>
<tr>
<th>COMMAND ===&gt;</th>
<th>SCROLL ===&gt; CSR MORE: +</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ELTM - test</td>
<td></td>
</tr>
</tbody>
</table>

**Monitor Attributes:**
- **Parm**  Test     (Identifier)
- **Interval** 00:01:30 (hh:mm:ss)
- **Wval** 1.0000 (Warning value)
- **Wmsg** (Log warnings to)
- **Wlim** 10 (Warnings limit)
- **Title** testNEG
- **Plotmax** 0.0000 (Maximum PLOT X-Axis value)
- **Ranges** (1-4 Range Distr. Upper Limits)
- **Log** NO (NO,ATSTOP,ATPD,ATINTVL,ATWARN)

**Specify Workload Selections:**
- **Pgmtype** (MPP, BMP, MDP, NDP, FPU, TPI, DBT, NOTDBT)
- **Trantype** (DLI, DB2, FP)
- **Tran**
- **Prog**
- **Psb**
- **Class**

---

**Purge a monitor service request**

Use the P (Purge) line command to delete the data collected by the selected monitor service.

The Purge IMS monitor Request dialogs displayed, as shown in the following figure.
To confirm the deletion of the collected data, press Enter.

**Figure 108: Purge IMS monitor Request dialog**

Stop a monitor service request

Use the Z (Stop) line command to stop the selected monitor service.

Data collection stops, but the data that was already collected is retained.

Lock a monitor service

Use the L (Lock) line command to lock a monitor service.

When a monitor service is locked, no monitor service requests can be made.

Unlock a monitor service

Use the U (Unlock) line command to unlock a locked monitor service.

When a monitor service is locked, no monitor service requests can be made. Unlock the monitor service to allow monitor service requests.
Learn about monitor services

Use the H (Help) line command to learn about a monitor service.

A description of the service, its parameters, and the syntax of its warning message are displayed.

A brief description of the monitors is also in “IMS workload monitors” on page 175 and “IMS resource monitors” on page 177.

IMS workload monitors

There are numerous monitor plot views for the IMS workload monitor services.

The view descriptions are organized by IMS area. Each table of views lists each plot view and its corresponding monitor, and describes the performance data provided by the view:

- “Global region calls monitors” on page 175
- “Elapsed timing monitors” on page 176
- “Processed transactions monitor” on page 177

Note

The @ELTM and @RSTM workload monitors are internal to the MainView VistaPoint product, which uses workload definitions to monitor service level objectives. @RSTM plots the average response time, and @ELTM plots the average elapsed time for transactions that occur within IMS targets defined as part of a MainView VistaPoint workload.

Global region calls monitors

The global region calls monitors provide performance data about all region calls issued during IMS application program processing, including DL/I calls issued by DBCTL regions.
Table 5: Workload monitors for global region calls

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
<tbody>
<tr>
<td>$CBMP</td>
<td>BMP and JBP region calls&lt;br&gt;This monitor reports the number of calls issued by BMP and JBP regions during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.</td>
<td>I$CBMP</td>
</tr>
<tr>
<td>$CDBT</td>
<td>DBCTL region DL/I calls&lt;br&gt;This monitor reports the number of DL/I calls issued by DBCTL threads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.</td>
<td>I$CDBT</td>
</tr>
<tr>
<td>$CMPP</td>
<td>MPP and JMP region calls&lt;br&gt;This monitor reports the number of calls issued by MPP, JMP, and IFP regions during the sampling period. Depending on the parameters specified with the monitor, the reported value is then number of all calls or the number of all calls of a single type.</td>
<td>I$CMPP</td>
</tr>
<tr>
<td>$CTOT</td>
<td>All region calls&lt;br&gt;This monitor reports the number of calls issued by all region types during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.</td>
<td>I$CTOT</td>
</tr>
</tbody>
</table>

**Elapsed timing monitors**

The elapsed timing monitors provide performance data about transaction elapsed, input, and response time.

Table 6: Workload monitors for elapsed timing

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ELAP</td>
<td>Average elapsed time&lt;br&gt;This monitor reports the average elapsed time of workload MPP, JMP, and IFP transactions during the sampling period. The average elapsed time of DBCTL threads is also measured. Depending on the parameters specified with the monitor, the reported value is the average transaction elapsed time for all workloads or for all workloads of a single type.</td>
<td>I@ELAP</td>
</tr>
<tr>
<td>@RESP</td>
<td>Average response time&lt;br&gt;This monitor reports the average response time of workload MPP, JMP, and IFP transactions during the sampling period. Depending on the parameters specified with the monitor, the reported value is the average transaction response time for all workloads or for all workloads of a single type.</td>
<td>I@RESP</td>
</tr>
</tbody>
</table>
Processed transactions monitor

The #PROC monitor measures how many MPP, JMP, or IFP transactions IMS processed.

Table 7: Workload monitor for processed transactions

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
<tbody>
<tr>
<td>#PROC</td>
<td>Transactions processed</td>
<td>I#PROC</td>
</tr>
</tbody>
</table>

This monitor reports the number of workload MPP, JMP, and IFP transactions processed during a sampling period. Depending on the parameters specified with the monitor, the reported value is the number of MPP, JMP, or IFP transactions processed for all workloads or for a single workload type.

IMS resource monitors

There are numerous monitor plot views for the IMS resource monitor services. The view descriptions are organized by IMS area as follows:

- “Scheduling monitors” on page 177
- “Dependent regions monitors” on page 178
- “Database activities monitors” on page 179
- “IMS internals monitors” on page 181
- “IMS interaction with the operating system monitors” on page 183
- “IRLM activity monitors” on page 184

Scheduling monitors

The scheduling monitors provide performance data about transaction arrivals and transactions processed.
### Table 8: Resource monitors for scheduling

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARVPR</td>
<td>Transaction arrivals by program</td>
<td>IARVPR</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of transaction arrivals by program (PSB) during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total transaction arrivals or the number for one program or a group of programs.</td>
<td></td>
</tr>
<tr>
<td>ARVTR</td>
<td>Transaction arrivals by transaction</td>
<td>IARVTR</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of transaction arrivals by transaction name. Depending on the parameters specified with the monitor, the reported value is the total number of transaction arrivals or the number of arrivals for one transaction or a group of transactions.</td>
<td></td>
</tr>
<tr>
<td>PRCPR</td>
<td>Transactions processed by program</td>
<td>IPRCPR</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of transactions processed by a program during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total transactions processed or the number processed by one program or a group of programs.</td>
<td></td>
</tr>
<tr>
<td>PRCTR</td>
<td>Transactions processed by transaction</td>
<td>IPRCTR</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of transactions processed during a sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of transactions processed or the number of times one transaction or a group of transactions was processed.</td>
<td></td>
</tr>
</tbody>
</table>

### Dependent regions monitors

The dependent region monitors provide performance data about DB2 access by programs executing in the dependent regions.

### Table 9: Resource monitors for dependent regions

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHKPT</td>
<td>Number of checkpoints by BMP</td>
<td>ICHKPT</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the total number of checkpoint calls performed since the BMP region started.</td>
<td></td>
</tr>
<tr>
<td>DBGU</td>
<td>DL/I database calls</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>This service monitors the total number of DL/I database calls by region, and issues a warning if the threshold is exceeded.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The number of calls is calculated as the number of DL/I database calls performed in the specified region since the last scheduling divided by the number of MESSAGE GET UNIQUEs performed. Fast Path calls are not included.</td>
<td></td>
</tr>
</tbody>
</table>
Monitor name | Description | View name
--- | --- | ---
DBTOT | DB CALLS/SCHED BY RGN
This service monitors the number of database DL/I calls performed since the last scheduling by region, and issues a warning if the threshold is exceeded.
The number of calls is calculated as the number of DL/I database calls performed in the specified region since the last scheduling (measured at the time of the sample) compared to the warning threshold. Fast Path calls are not included. | None

DLIDB | DL/I DB call time
This monitor reports the number of seconds that the database DL/I call has lasted. Depending on the parameters specified with the monitor, the reported value is for all regions, for all regions except BMPs and JBP, or for a specified region only. | IDLIDB

DLIDC | DL/I DC call time
This monitor reports the number of seconds that the transaction DL/I call has lasted. Depending on the parameters specified with the monitor, the reported value is for all regions, for only GU calls to the I/O PCB, for only GU calls to the I/O PCB for non-WFI and non-PWFI transactions, for all regions except WFI regions, or for a specified region only. | IDLIDC

MXPST | Active regions
This service reports the number of active regions. | None

WAIT | Region in a long PI WAIT
This service monitors regions for excessive PI wait times.
A warning is written when any region is detected to be in a long PI wait (exceeding the threshold value, defined in seconds).
This service can show only one region exception at a time. When the warning condition in one region is cleared, the service continues to check other regions until another exception condition is found and displayed. | None

**Database activities monitors**

The database monitors provide performance data about DL/I buffer pool activity.

**Table 10: Resource monitors for database activities**

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
</table>
| DBHIT | Database hit ratio for OSAM buffer pool
This monitor reports the hit ratio by subpool for the OSAM buffer pool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the hit ratio for the entire OSAM buffer pool or for one subpool. | IDBHIT |
<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
</table>
| DBIO        | Database I/O count by subpool  
This monitor reports the number of database I/O by subpool for the OSAM pool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the database I/O for the total OSAM pool or for one subpool. | IDBIO     |
| DBSTL       | Database buffer steals by subpool  
This monitor reports database buffer steal writes by subpool for the OSAM pool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the database buffer steal writes for the total OSAM pool or for one subpool. | IDBSTL    |
| HPACC       | Hiperspace access by subpool  
This monitor reports hiperspace access by subpool for all VSAM buffer spools during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of successful hiperspace reads and writes or the number of successful hiperspace reads and writes for one subpool. | IHPACC    |
| HPHIT       | Hiperspace hit ratio by subpool  
This monitor reports the VSAM hiperspace hit ratio by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the hit ratio for all VSAM buffer spools that have associated hiperspace buffers or the hit ratio for one subpool. | IHPHIT    |
| HPSTL       | Hiperspace buffer steal by subpool  
This monitor reports VSAM hiperspace buffer steals by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of unsuccessful reads from all VSAM hiperspace buffer pools or from one subpool. | IHPSTL    |
| SBUSE       | Sequential buffer storage by region  
This monitor reports sequential buffering storage by region during the sampling period. Depending on the parameters specified with the monitor, the reported value is kilobytes of virtual storage used by all regions, a group of regions, or a single region. | ISBUSE    |
| VDBIO       | VSAM database I/O by subpool  
This monitor reports VSAM database I/O by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of I/Os for the total VSAM pool or for one subpool. | IVDBIO    |
| VDBWR       | VSAM writes by subpool  
This monitor reports VSAM writes by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of VSAM-initiated writes for the total VSAM pool or for one subpool. | IVDBWR    |
Monitor name | Description                                                                                                                                                                                                 | View name  
---|---|---
VHIT | VSAM hit ratio by subpool  
This monitor reports the VSAM hit ratio by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the hit ratio for the total VSAM pool or for one subpool. | IVHIT  

### IMS internals monitors

The IMS internals monitors provide performance data about IMS internal activity for program isolation, pools, logging, latching, and pool allocation.

#### Table 11: Resource monitors for IMS internals

| Monitor name | Description                                                                                                                                                                                                 | View name  
---|---|---
DBWP | Database work area pool utilization  
This monitor reports the percentage of the database work area pool utilization during the sampling period. | IDBWP  
DMBP | DMB pool utilization  
This monitor reports the percentage of the DMB pool utilization during the sampling period. | IDMBP  
DSAP | Dynamic SAP utilization  
This monitor reports the percentage of the dynamic save area pool utilization during the sampling period. | IDSAP  
EPCB | EPCB pool utilization  
This monitor reports the percentage of the extended PCB (EPCB) pool utilization during the sampling period. If Fast Path is not installed in IMS, the IEPCB plot is always zero. | IEPCB  
LAWT | Average latch wait time  
This monitor reports the average latch wait time in microseconds within the sampling period or since the last IMS checkpoint if a checkpoint occurs within the period. Depending on the parameters specified with the monitor, the reported value is the average wait time for all latch types or for a specific latch type. | ILAWT  
LMAWT | Latch wait time  
This service monitors the maximum latch wait time (in microseconds) and issues a warning if it exceeds the defined threshold. If more than one latch type exceeds the threshold, only the one with the largest average wait time is measured. | None  
LOGSW | Log switch last 10 intervals  
This service monitors the number of OLDS switches that occur and issues a warning if the number of switches exceeds the defined threshold. | ILOGSW
<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
</table>
| OBUFW       | OLDS buffer waits  
This monitor reports the number of times that the IMS logical logger had to wait for a buffer to be written to the OLDS during the sampling period. | IOBUFW |
| OCHKW       | OLDS check writes  
This monitor reports the number of check write requests to the IMS logical logger during the sampling period. | IOCHKW |
| PIENQ       | Program isolation enqueues by region  
This monitor reports the number of outstanding program isolation (PI) enqueues held by IMS regions during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of PI enqueues held by all IMS dependent regions, by one region, or by a group of regions. | IPIENQ |
| PIMAX       | Maximum PI enqueues  
This service monitors PI enqueues. The region with the most outstanding PI enqueues exceeding the threshold is reported. If more than one region exceeds the threshold, only the one with the most enqueues is returned. | None |
| PIPL        | Program isolation pool utilization  
This monitor reports the percentage of the program isolation (PI) pool utilization during the sampling period. PI pool percentage usage is calculated as the ratio of allocated bytes to the total number of bytes that can be assigned to the pool. | IPIPL |
| POOLA       | Pool allocated storage  
This monitor reports the amount of allocated pool storage in bytes during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of allocated bytes of CSA storage, ECSA storage, or non-CBT pool storage. | IPOOLA |
| POOLN       | Net expansion count  
This monitor reports the difference in bytes between the total expansion and total compression of blocks allocated to non-CBT fixed storage pools. | IPOOLN |
| POOLT       | Total expansion/compression count  
This monitor reports the number of times that non-CBT storage pool blocks expanded and compressed during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total block expansions and compressions for all pools or the number for a specific non-CBT fixed storage pool. | IPOOLT |
| PSBP        | PSB pool utilization  
This monitor reports the percentage of the PSB pool utilization during the sampling period. If the IMS option is LSO=S, DLISAS PSB pool usage is monitored. If the LSO option is not S, total PSB pool usage is monitored. | IPSBP |
<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
</table>
| PSBW        | PSB work area pool utilization  
This monitor reports the percentage of the PSB work area pool utilization during the sampling period. | IPSBW |
| WADIO       | WADS I/O  
This monitor reports the number of EXCPs to a write-ahead data set (WADS) during the sampling period. If dual WADS logging is in effect, the actual number of EXCPs is twice the reported number. | IWADIO |
| WADRS       | WADS I/O response  
This service monitors the response time of WADS I/O. | IWADRS |
| WKAP        | General work area pool utilization  
This monitor reports the percentage of the general work area pool utilization during the sampling period. | IWKAP |

**IMS interaction with the operating system monitors**

These monitors provide performance data about resources used by IMS interaction with the operating system.

**Table 12: Resource monitors for the IMS interaction with the operating system**

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
</table>
| CSAFR       | CSA fragmentation  
This monitor reports CSA fragmentation and issues a warning when a block of storage of threshold bytes could not be allocated in CSA subpool 241.  
The threshold should be set equal to the increment specified for PI pool expansion. | None |
| CSAUT       | CSA utilization  
This monitor reports the percentage of CSA storage utilization during the sampling period. | ICSAUT |
| DLIO        | DL/I EXCP count by ddname  
This monitor reports the number of successful EXCPs for DL/I data sets allocated to the DLISAS region during the sampling period by ddname. Depending on the parameters specified with the monitor, the reported value is the total EXCPs for all data sets allocated to the IMS DLISAS region, a group of data sets, or a single data set. | IDLIO |
| DPAGE       | Demand paging by region  
This monitor reports the number of demand page-ins by region during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total demand page-ins for the system or demand page-ins for one IMS region. | IDPAGE |
IRLM activity monitors

The IRLM monitors provide performance data about IRLM activity.

Table 13: Resource monitors for IRLM activity

<table>
<thead>
<tr>
<th>Monitor name</th>
<th>Description</th>
<th>View name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDLCK</td>
<td>IRLM deadlocks</td>
<td>ILDLCK</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of IRLM deadlocks that occurred during the sampling period.</td>
<td></td>
</tr>
<tr>
<td>LHELD</td>
<td>IRLM locks held</td>
<td>ILHELD</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of IRLM locks held by an IMS dependent region during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of IRLM locks held by the target IMS or by a specific region.</td>
<td></td>
</tr>
<tr>
<td>LKMAX</td>
<td>Maximum IRLM locks</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the name of the region with the largest number of outstanding IRLM locks that exceed the defined threshold. If more than one region is over the threshold, the name of the one with the most locks is returned.</td>
<td></td>
</tr>
<tr>
<td>LKREQ</td>
<td>IRLM lock requests</td>
<td>ILKREQ</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of IRLM lock requests that occurred during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of lock requests for the entire IRLM system or the subset from the target IMS subsystem.</td>
<td></td>
</tr>
<tr>
<td>LSUSP</td>
<td>IRLM suspensions</td>
<td>ILSUSP</td>
</tr>
<tr>
<td></td>
<td>This monitor reports the number of IRLM suspensions that occurred during the sampling period.</td>
<td></td>
</tr>
<tr>
<td>Monitor name</td>
<td>Description</td>
<td>View name</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
</tbody>
</table>
| LWAIT       | Region in IRLM suspend state  
This service monitors regions in IRML suspend state. A warning is issued when a monitored region is in an IRLM suspend state longer than the defined threshold value specified in seconds. | None      |
| LWNUM       | Regions in IRLM suspension  
This monitor reports the number of suspended IRLM requests that occurred during the sampling period. Depending on the parameters specified with the monitor, the reported value is all suspended requests from the current target IMS, all suspended requests from all targets, or all requests suspended longer than a specified number of seconds from all targets or the current target. | ILWNUM    |
Monitor IMS pools and the operating system

Use the resource views to show the status, activity, and performance of IMS resources when IMS interacts with the operating system and the resources under the control of the operating system.

Access to the resource views

To access the resource views, enter the view name on the COMMAND line or enter VIEWS on the COMMAND line and select a view from the list.

Tip
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Available resource views

The following resource views are provided:

- “DMB Pool Utilization view (IDMBUT)” on page 188
- “PSB Pool Utilization view (IPSBUT)” on page 188
- “Dispatcher Statistics view (IDSPST)” on page 189
- “Real Storage Statistics view (IRS)” on page 189
- “ Peek view (PK)” on page 190
- “Fast Path Buffer Statistics view (IFPBST)” on page 190
DMB Pool Utilization view (IDMBUT)

The DMB Pool Utilization view (IDMBUT) shows the current status of the DMB pool, including the number of resident blocks, the remaining free space, and the fragmentation.

**Figure 109: DMB Pool Utilization view (IDMBUT)**

<table>
<thead>
<tr>
<th>24APR2009 15:11:09</th>
<th>COMMAND ===&gt;</th>
<th>SCROLL ===&gt;</th>
<th>CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
<td>W1 =IDMBUT=</td>
<td>-----</td>
</tr>
<tr>
<td>CURRENT BLOCK SPACE</td>
<td></td>
<td>DMB POOL UTILIZATION</td>
<td>-----</td>
</tr>
<tr>
<td>CURRENT FREE SPACE</td>
<td></td>
<td>BLOCKS MINIMUM AVERAGE MAXIMUM TOTAL</td>
<td>-----</td>
</tr>
<tr>
<td>1 98304</td>
<td></td>
<td>98304 98304 98304 98304</td>
<td>-----</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

PSB Pool Utilization view (IPSBUT)

The PSB Pool Utilization view (IPSBUT) reports the percentage of the PSB pool utilization during the sampling interval.

If the IMS option is LSO=S, DLISAS PSB pool usage is monitored. If the LSO option is not S, total PSB pool usage is monitored.

**Figure 110: PSB Pool Utilization view (IPSBUT)**

<table>
<thead>
<tr>
<th>24APR2009 15:47:14</th>
<th>COMMAND ===&gt;</th>
<th>SCROLL ===&gt;</th>
<th>CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
<td>W1 =IPSBUT=</td>
<td>-----</td>
</tr>
<tr>
<td>CURRENT BLOCK SPACE</td>
<td></td>
<td>PSB POOL UTILIZATION</td>
<td>-----</td>
</tr>
<tr>
<td>CURRENT FREE SPACE</td>
<td></td>
<td>BLOCKS MINIMUM AVERAGE MAXIMUM TOTAL</td>
<td>-----</td>
</tr>
<tr>
<td>1 40960</td>
<td></td>
<td>40960 40960 40960 40960</td>
<td>-----</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
**Dispatcher Statistics view (IDSPST)**

The Dispatcher Statistics view (IDSPST) summarizes z/OS and IMS dispatching. It shows the status of the IMS regions as seen by z/OS and provides statistics about internal z/OS multitasking.

![Dispatcher Statistics view (IDSPST)](image)

No hyperlinks are available on the view.

---

**Real Storage Statistics view (IRS)**

The Real Storage Statistics view (IRS) displays information about real storage.

![Real Storage Statistics view (IRS)](image)

No hyperlinks are available on the view.
The Peek view (PK) displays the real-time contents of storage for addresses, control blocks, tables, and modules.

On the PK view:

- Enter information in the **Block/Table name**, **System**, **offset**, **Job/STC**, **Hex ASID**, and **Hex Address** fields to specify the storage you want to display
- Use the **F7** and **F8** keys to scroll forward and back in the display
- Use the **Enter** key to refresh the displayed data
- Use line commands, special characters, and hyperlinks to navigate the storage display
- Use the FC and FX primary commands to find information in the display

For more information about how to use the PK view, see the online Help.

No hyperlinks are available on the view.

The Fast Path Buffer Statistics view displays information about the Fast Path buffer pool. It shows the buffer pool size, the options in effect, and the users of pool.
The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Region Activity Detail view (IRGNDTLR), which provides detailed information about the activity for the selected region or thread</td>
</tr>
</tbody>
</table>

**Fast Path 64-Bit Buffer Statistics view (IFP64ST)**

The Fast Path 64-Bit Buffer Statistics (IFP64ST) view displays information about the Fast Path 64-bit buffer pool. It shows the buffer pool size, location, and type.

**Figure 115: Fast Path 64-Bit Buffer Statistics view (IFP64ST)**

No hyperlinks are available on the view.
Fast Path 64-Bit Subpool Detail view (IFP64DTL)

The Fast Path 64-Bit Subpool Detail (IFP64DTL) view displays detailed information about a specific Fast Path 64-bit buffer subpool.

**Figure 116: Fast Path 64-Bit Subpool Detail view (IFP64DTL)**

<table>
<thead>
<tr>
<th>Subpool Name</th>
<th>DBFC0001</th>
<th>64Bit For Extents</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent ID</td>
<td>15</td>
<td>Total 64Bit Usage</td>
<td>16384</td>
</tr>
<tr>
<td>Number Extents</td>
<td>0</td>
<td>DMHR Storage Extents</td>
<td>0</td>
</tr>
<tr>
<td>Buffer Size</td>
<td>512</td>
<td>DMHR Storage Subpool</td>
<td>14848</td>
</tr>
<tr>
<td>Storage Size</td>
<td>16384</td>
<td>+---- ECSA Storage -----+</td>
<td></td>
</tr>
<tr>
<td>DMHR Size</td>
<td>14848</td>
<td>Control Blocks</td>
<td>592</td>
</tr>
<tr>
<td>Buffers Available</td>
<td>32</td>
<td>Extents</td>
<td>0</td>
</tr>
<tr>
<td>Buffers Used</td>
<td>0</td>
<td>Extent Control Blocks</td>
<td>0</td>
</tr>
<tr>
<td>%Used Buffers</td>
<td>0.0</td>
<td>Buffer Storage Extents</td>
<td>0</td>
</tr>
<tr>
<td>Buffers Unknown</td>
<td>0</td>
<td>Total ECSA Used</td>
<td>15440</td>
</tr>
<tr>
<td>Total Buffers</td>
<td>32</td>
<td>+---- EPVT Storage -----+</td>
<td></td>
</tr>
<tr>
<td>Extent Storage Used</td>
<td>0</td>
<td>Control Blocks</td>
<td>156</td>
</tr>
<tr>
<td>Extents Available</td>
<td>0</td>
<td>Extents</td>
<td>0</td>
</tr>
<tr>
<td>Storage Used for Buffers</td>
<td>0</td>
<td>Extent Control Blocks</td>
<td>0</td>
</tr>
<tr>
<td>Buffers Being Quiesced..</td>
<td>0</td>
<td>Buffer Storage Extents.....</td>
<td>0</td>
</tr>
<tr>
<td>Location</td>
<td>n/a</td>
<td>Total EPVT Used</td>
<td>156</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Analyze IMS system status

The IMS system status views provide real-time, detailed information about an individual IMS subsystem, information that is vital to the work of operators, systems programmers, and IMS performance analysts.

IMS system status analysis overview

The IMS system status views provide information about an IMS subsystem in many different views.

By using the views, you can rely on one group of views to access the most important information about an IMS subsystem in an overview format.

Most of the system status views include hyperlinks that take you to more detailed information about a selected field.

For individual IMS subsystems, the system status views provide:

- System status information in a convenient "dashboard" view
- Resource availability information for vital resources in a single view
- Region/thread status information in a single view
- A list of the parameters currently in effect for an IMS subsystem
- A list of all warning messages for an IMS subsystem
- Information about the status of subsystem connections

The following IMS system status views are provided:

- “DBCTL Dashboard Overview view (DBCDSHOR)” on page 195
- “DBCTL Dashboard view (DBCDASHR)” on page 197
Access the system status views

You can access a filtered version of most of the system status views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS Operations Menu (EZIOPSR)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering IMSSTAT on the COMMAND line and then selecting a view from the list of system status views.

For more specific information about hyperlinks to the system status views, see the sections that describe the views.
The DBCTL Dashboard Overview view (DBCDSHOR) is a real-time detail view that provides vital status and availability information about multiple IMS subsystems.

You can use the view to analyze system status for all your IMS subsystems. You can hyperlink from the fields in the view to access other views that provide related information in greater detail.

You can hyperlink to the DBCDSHOR view by selecting the Dashboard option from:

- IMS SSI Easy Menu (EZISSI)
- DBCTL Operations Menu (EZDOPSR), if there are multiple members in the context

The following hyperlinks are provided in the DBCDSHOR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS ID</td>
<td>DBCTL Dashboard Menu (DBCMDASH) for a DBCTL subsystem or IMS Dashboard Menu (IMSMdashboard) for an IMS subsystem. DBCMDASH and IMSMDBASH provide quick access to system status information for the selected subsystem.</td>
</tr>
<tr>
<td>Status</td>
<td>DBCTL Dashboard view (DBCDASH) for a DBCTL subsystem or IMS Dashboard view (IMSDASH) for an IMS subsystem. DBCDASH and IMSMDBASH provide detailed status and availability information for the selected subsystem.</td>
</tr>
<tr>
<td>Warn Msgs</td>
<td>IMS Warning Messages view (IMSWARNR), if there are warning messages, where you can view the ID and text of the warning messages for the selected subsystem</td>
</tr>
<tr>
<td>Hyperlink from</td>
<td>To access</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Unavl Resrc</td>
<td>DBCTL Unavailable Resources view (DBCUNRSR) for a DBCTL subsystem or IMS Unavailable Resources view (IMSUNRSR) for an IMS subsystem. DBCUNRSR and IMSUNRSR show the availability status of resources for the selected subsystem.</td>
</tr>
<tr>
<td>Locks</td>
<td>PI Region Lock Wait List view (IPIRGWT), if you are using program isolation, which provides a list of all regions waiting for database resource locks and shows the ultimate holder of each resource in contention. IRLM Region Lock Wait List view (ILKRGWT), if you are using IRLM, which provides a list of all regions that are waiting for database resource locks.</td>
</tr>
<tr>
<td>Latch Waits</td>
<td>Latch Summary view (ILATCH), which shows detailed contention information for latches</td>
</tr>
<tr>
<td>Regns</td>
<td>IMS Region Status view (IMSRGNSR), which provides information about the selected subsystem’s regions and threads</td>
</tr>
<tr>
<td>IMS Logs</td>
<td>IMS Log Status view (ILOGST), which provides information about the online log data set (OLDS) and write-ahead data set (WADS) for the selected subsystem</td>
</tr>
<tr>
<td>Pool</td>
<td>Fast Path Buffer Pool Statistics view (IFPBST); if DMBW pool utilization exceeds the specified threshold, DMBW is displayed in the field. IMS Pools Summary (CBT) view (IPOOLC), with the RECA pool selected; if RECA pool utilization exceeds the specified threshold, RECA is displayed in the field. PI Statistics view (IPISTAT); if PI pool utilization exceeds the specified threshold, PI is displayed in the field. PSB Work Pool Detail (Var Non-CBT) view (IPSBWDTL), with the PSBW pool selected; if PSBW pool utilization exceeds the specified threshold, PSBW is displayed in the field. IMS Variable Pool Detail (Non-CBT) view (IPOOLDV), with the DBWP pool selected; if DMBW pool utilization exceeds the specified threshold, DMBW is displayed in the field. IMS Pools Summary (Non-CBT) view (IPOOLS); if no pool utilization threshold is exceeded, Okay is displayed in the field.</td>
</tr>
<tr>
<td>CPU Util</td>
<td>JCPUR view of the MainView for z/OS product, if the product is installed</td>
</tr>
<tr>
<td>Sub Sys</td>
<td>IMS Subsystem Connections view (IMSCONR), which shows the status of all subsystems that connect to the selected IMS subsystem, including all DBCTL connections</td>
</tr>
<tr>
<td>IMSplex</td>
<td>IMSplex Member Status view (IPXSUMR), which shows the structure and status of IMSplex group members</td>
</tr>
</tbody>
</table>
DBCTL Dashboard view (DBCDASHR)

The DBCTL Dashboard view (DBCDASHR) is a real-time detail view that provides vital status and availability information about a specific IMS subsystem, including information about the subsystem’s IMSplex connectivity.

You can use the Dashboard view to analyze system status, and you can hyperlink from many of the fields to access a view or display that provides related information in greater detail.

You can hyperlink to the DBCDASHR view by selecting the Dashboard option from the following menus:

- DBCTL Fast Menu (EZIFAST)
- DBCTL Easy Menu (EZIMS)
- IMS System Menu (EZIMSS)
- DBCTL Operations Menu (EZDOPSR), if there is only one member in the context
- IMS Information Menu (IMSMINFO)

Figure 118: DBCTL Dashboard view (DBCDASHR)

The following hyperlinks are provided in the DBCDASHR view:
<table>
<thead>
<tr>
<th><strong>Hyperlink from</strong></th>
<th><strong>To access</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS ID</td>
<td>DBCTL Dashboard Menu (DBCMDASH), where you can get quick access to system status information for an IMS subsystem</td>
</tr>
<tr>
<td>Warnings</td>
<td>IMS Warning Messages view (IMSWARNR), if there are warning messages, where you can view the ID and text of the warning messages for the system</td>
</tr>
<tr>
<td>Unavl Res</td>
<td>DBCTL Unavailable Resources view (DBCUNRISR)</td>
</tr>
<tr>
<td>Pool</td>
<td>Fast Path Buffer Pool Statistics view (IFPBST), if DMBW pool utilization exceeds the specified threshold (DMBWUtil is displayed in the field)</td>
</tr>
<tr>
<td></td>
<td>IMS Pools Summary (CBT) view (IPOOLC), with the RECA pool selected, if RECA pool utilization exceeds the specified threshold (RECAUtil is displayed in the field)</td>
</tr>
<tr>
<td></td>
<td>PI Statistics view (IPISTAT), if PI pool utilization exceeds the specified threshold (PIUtil is displayed in the field)</td>
</tr>
<tr>
<td></td>
<td>PSB Work Pool Detail (Var Non-CBT) view (IPSBWDTL), with the PSBW pool selected, if PSBW pool utilization exceeds the specified threshold (PSBWUtil displayed in the field)</td>
</tr>
<tr>
<td></td>
<td>IMS Variable Pool Detail (Non-CBT) view (IPOOLDV), with the DBWP pool selected, if DMBW pool utilization exceeds the specified threshold (DMBWUtil displayed in the field)</td>
</tr>
<tr>
<td></td>
<td>IMS Pools Summary (Non-CBT) view (IPOOLS), if no pool utilization threshold is exceeded (Okay is displayed in the field)</td>
</tr>
<tr>
<td>IMSplex</td>
<td>IMSplex Member Status view (IPXSUMR)</td>
</tr>
<tr>
<td>Logging</td>
<td>IMS Log Status view (ILOGST), which provides information about the online log data set (OLDS) and write-ahead data set (WADS) for the selected subsystem</td>
</tr>
<tr>
<td>Latch</td>
<td>Latch Summary service (LATCH)</td>
</tr>
<tr>
<td>CPU</td>
<td>MainView for z/OS JCPUR view, if the product is installed</td>
</tr>
<tr>
<td>Region</td>
<td>IMS Region Status view (IMSRGNSR), which provides information about the selected subsystem's regions and threads</td>
</tr>
<tr>
<td>Locking</td>
<td>PI Region Lock Wait List view (IPIRGWT), if you are using program isolation</td>
</tr>
<tr>
<td></td>
<td>IRLM Region Lock Wait List view (ILKRGWT), if you are using IRLM</td>
</tr>
<tr>
<td>Subsys</td>
<td>IMS Subsystem Connections view (IMSCONR)</td>
</tr>
<tr>
<td>VSAM I/O Rate</td>
<td>Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR)</td>
</tr>
<tr>
<td>VSAM Wrst Hit</td>
<td>Database I/O Activity for VSAM Buffer Pools (IMS Systems) view (IDABVSMR)</td>
</tr>
<tr>
<td>VSAM Buf Steal</td>
<td>Database I/O Activity for VSAM Buffer Pools (IMS Systems) view (IDABVSMR)</td>
</tr>
<tr>
<td>OSAM I/O Rate</td>
<td>Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR)</td>
</tr>
<tr>
<td>OSAM Wrst Hit</td>
<td>Database I/O Activity for OSAM Buffer Pools (IMS Systems) (IDABOSMR)</td>
</tr>
<tr>
<td>OSAM Buf Steal</td>
<td>Database I/O Activity for OSAM Buffer Pools (IMS Systems) (IDABOSMR)</td>
</tr>
<tr>
<td>Hyperlink from</td>
<td>To access</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>DEDB I/O Rate</td>
<td>Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR)</td>
</tr>
<tr>
<td>Average I/O Time</td>
<td>Database Activity Detail for an IMS System view (IDASDTLR)</td>
</tr>
<tr>
<td>Average FF/DLICal</td>
<td>Database Activity Detail for an IMS System view (IDASDTLR)</td>
</tr>
<tr>
<td>Average FP/DLICal</td>
<td>Database Activity Detail for an IMS System view (IDASDTLR)</td>
</tr>
<tr>
<td>Avl OLDS</td>
<td>IMS Log Status view (ILOGST), which provides information about the online log data set (OLDS) and write-ahead data set (WADS) for the selected subsystem</td>
</tr>
<tr>
<td>Pct PSBW</td>
<td>PSB Work Pool Detail (Var Non-CBT) view (IPSBWDTL), with the PSBW pool selected</td>
</tr>
<tr>
<td>Pct DMBW</td>
<td>IMS Variable Pool Detail (Non-CBT) view (IPOOLDV), with the DBWP pool selected</td>
</tr>
<tr>
<td>Pct DBBF</td>
<td>Fast Path Buffer Pool Statistics service (FPBST)</td>
</tr>
<tr>
<td>Pct PI</td>
<td>PI Statistics view (IPISTAT)</td>
</tr>
<tr>
<td>IMS CTL</td>
<td>Real Storage Statistics view (IRS)</td>
</tr>
<tr>
<td>IRLM</td>
<td>IRLM Statistics view (ILKSTAT), if the IMS is using IRLM lock management</td>
</tr>
<tr>
<td>DLISAS</td>
<td>Real Storage Statistics view (IRS)</td>
</tr>
<tr>
<td>DBRC</td>
<td>Real Storage Statistics view (IRS)</td>
</tr>
<tr>
<td>Dep Rgns</td>
<td>Real Storage Statistics view (IRS)</td>
</tr>
<tr>
<td>MVS</td>
<td>MainView for z/OSJCPUR view, if the product is installed</td>
</tr>
</tbody>
</table>

**IMS Warning Messages view (IMSWARNR)**

The IMS Warning Messages view (IMSWARNR) is a real-time view that displays monitor warning messages and IMS system warning messages.

You can use the view to access all warning messages that are detected for an IMS subsystem.

You can hyperlink to the IMSWARNR view from the Warnings option in the:

- DBCTL Dashboard Menu (DBCMDASH)

For more information, view the Quick Course "MainView for IMS - Dashboard".
IMS Subsystem Connections view (IMSCONR)

The IMS Subsystem Connections view (IMSCONR) is a real-time view that shows the status of all subsystems that connect to IMS, including all DBCTL connections.

You can use following line commands on the view:

- SS starts a subsystem
- PS stops a subsystem

You can hyperlink to the IMSCONR view from the:

- Subsys field in the DBCTL Dashboard Menu (DBCMDASH)
- Subsystem Connections option in the IMS Easy Menu (EZIMS), the IMS SSI Easy Menu (EZISSI), the DBCTL Dashboard Menu (DBCMDASH), and the IMS Information Menu (IMSMINFO)

- Connected Subsystems option in the IMS System Menu (EZIMSS) and the DBCTL Operations Menu (EZDOPSR)

For more information, view the Quick Course "MainView for IMS - Dashboard".

Figure 120: IMS Subsystem Connections view (IMSCONR)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsys Type (if the subsystem type is CICS)</td>
<td>IMS CICS Connections view (IMSCICSR), which shows each CICS that connects to the IMS subsystem</td>
</tr>
<tr>
<td>Thrd Cnt</td>
<td>IMS Connections Detail view (IMSCDTLR), which shows the status of each thread that connects to one or more subsystems</td>
</tr>
</tbody>
</table>

IMS Connections Detail view (IMSCDTLR)

The IMS Connections Detail view (IMSCDTLR) is a real-time view that shows the status of each thread that connects to one or more subsystems.

When a subsystem is defined but not yet connected by any region, the view shows the status of the subsystem. For subsystems that are defined and connected, the view shows the region that connects to the subsystem.

You can hyperlink to the IMSCDTLR view from the Thrd Cnt field in the IMS Subsystem Connections view (IMSCONR).

Figure 121: IMS Connections Detail view (IMSCDTLR)
The following hyperlink is provided on the IMSCDTLR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>Region/Thread Activity Summary view (DRGNSUMR), which provides information about active regions and threads and the transactions that are currently executing</td>
</tr>
</tbody>
</table>

**IMS CICS Connections view (IMSCICSR)**

The IMS CICS Connections view (IMSCICSR) is a real-time view that shows each CICS subsystem that connects to the IMS subsystem.

The view also shows PZP values, such as the minimum/maximum thread, NBA/OBA values, and current thread utilization.

You can hyperlink to the IMSCICSR view from the **Subsys Type** field in the IMS Subsystem Connections view (IMSCONR), if the subsystem type is CICS.

**Figure 122: IMS CICS Connections view (IMSCICSR)**

<table>
<thead>
<tr>
<th>15APR2007</th>
<th>15:27:38</th>
<th>------</th>
<th>MainView</th>
<th>WINDOW INTERFACE</th>
<th>(Vx.x.xx)</th>
<th>-----------</th>
<th>COMMAND</th>
<th>SCROLL</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN</td>
<td>ALT WIN</td>
<td>&gt;W1 =IMSCONR=IMSCICSR==I9A410CT=*======15APR2007==15:27:38====MVIMS====D====1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CICS</td>
<td>CICS</td>
<td>PZP</td>
<td>Cur Min Max</td>
<td>%Cur</td>
<td>%Cur</td>
<td>Min</td>
<td>Max</td>
<td>Hit</td>
<td>Hit</td>
</tr>
<tr>
<td>ApplID</td>
<td>Jobname</td>
<td>Suf</td>
<td>Thd Thd Thd</td>
<td>/Min</td>
<td>/Max</td>
<td>Hit</td>
<td>Hit</td>
<td>Thrd</td>
<td>Tot</td>
</tr>
<tr>
<td>CICS62CI</td>
<td>CICS6MVI</td>
<td>9B</td>
<td>10 10 25 100.0 40.0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**IMS Region Status view (IMSRGNSR)**

The IMS Region Status view (IMSRGNSR) is a real-time detail view that provides information about IMS regions and threads.

The view shows:

- The number of regions and threads that are started, by region/thread type
- The number of regions and threads that have exceeded a threshold
- A count of active and idle regions
- Information about regions that are waiting

You can hyperlink to the IMSRGNSR view from the:
The MPP Regions, Region Excess SQL, and Processing IMS Conn fields are not applicable to a DBCTL system.

The following hyperlinks are provided in the IMSRGNRSR view. The views you hyperlink to will show data only if you hyperlink from a IMSRGNRSR field with a value greater than zero.

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODBA Threads</td>
<td>Region/Thread Activity Summary view (DRGNSUMR), which shows summarized thread information</td>
</tr>
<tr>
<td>DBCTL Threads</td>
<td>Region/Thread Activity Summary view (DRGNSUMR), which shows summarized thread information</td>
</tr>
<tr>
<td>Excess CPU Msg Regns</td>
<td>Region Occupancy view (DRGOCCR), which summarizes dependent region processing by the region service provided to each class</td>
</tr>
<tr>
<td>Excess Occ Msg Regns</td>
<td>Region Activity Summary view (IRGNSUMR), which shows summarized region information</td>
</tr>
<tr>
<td>all other fields</td>
<td>Region Activity Summary view (IRGNSUMR), which shows summarized region information</td>
</tr>
</tbody>
</table>
DBCTL Unavailable Resources view (DBCUNRSR)

The DBCTL Unavailable Resources view (DBCUNRSR) is a real-time detail view that shows the availability status of IMS resources.

You can check resource availability and then hyperlink from a field to access related information that provides more details.

You can hyperlink to the DBCUNRSR view from the:

- Unavl Res option in the DBCTL Dashboard view (DBCDASHR)
- Unavl Resrc option in the DBCTL Dashboard Overview view (DBCDSHOR)
- Unavailable option in the DBCTL Fast Menu (EZIFAST)
- Unavailable Resources option in the DBCTL Easy Menu (EZIMS), the IMS SSI Menu (EZISSI), the DBCTL Operations Menu (EZDOPSR), and the DBCTL Dashboard Menu (DBCMDASH)

![Figure 124: DBCTL Unavailable Resources view (DBCUNRSR)]

The following hyperlinks are provided in the DBCUNRSR view. The views you hyperlink to will show data only if you hyperlink from a DBCUNRSR field with a value greater than zero.

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopped Programs</td>
<td>Programs with Exceptions view (IPGEXCP)</td>
</tr>
<tr>
<td>Stopped DBs</td>
<td>Databases with Exceptions view (IDBEXCP)</td>
</tr>
<tr>
<td>Stopped Areas</td>
<td>Fast Path DEDB Area Overview view (IFPSUMR)</td>
</tr>
</tbody>
</table>

IMS General Information view (IMSINFOR)

The IMS General Information view (IMSINFOR) is a real-time view that provides basic information about the currently specified IMS subsystem.
You can press the **Help** key from anywhere within the view to access an index with links to definitions of the fields.

You can hyperlink to the **IMSINFOR** view from the General Information option in the:

- IMS Fast Menu (EZIFAST)
- IMS System Menu (EZIMSS)
- DBCTL Dashboard Menu (DBCMDASH)

**Figure 125: IMS General Information view (IMSINFOR)**

The **IMSINFOR** view provides the following hyperlinks:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS Name</td>
<td>IMS General Information menu (IMSMINFO), which provides hyperlinks to IMS system status information</td>
</tr>
<tr>
<td>Hyperlink from</td>
<td>To access</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>IMS Queue</td>
<td>Queue Statistics for details about:</td>
</tr>
<tr>
<td></td>
<td>■ Queue attributes</td>
</tr>
<tr>
<td></td>
<td>■ QMGR Requests</td>
</tr>
<tr>
<td></td>
<td>■ Waits</td>
</tr>
<tr>
<td></td>
<td>■ Locks</td>
</tr>
<tr>
<td></td>
<td>■ Shared queue</td>
</tr>
<tr>
<td></td>
<td>You can also use hyperlinks to get information about the following queue attributes:</td>
</tr>
<tr>
<td></td>
<td>■ Buffer size</td>
</tr>
<tr>
<td></td>
<td>■ Short DSNs</td>
</tr>
<tr>
<td></td>
<td>■ Short and long message queue utilizations</td>
</tr>
<tr>
<td></td>
<td>■ Message queue data sets</td>
</tr>
<tr>
<td></td>
<td>■ Queue blocks utilization</td>
</tr>
<tr>
<td>Catalog</td>
<td>IMS Catalog Overview, which provides hyperlinks to Proclib members, Database Names, and Secondary Index databases</td>
</tr>
<tr>
<td>ACBIN64</td>
<td>ACBIN64 Pool Summary, which provides hyperlinks on pool names</td>
</tr>
</tbody>
</table>

**IMS Parameters view (IMSPARMR)**

The IMS Parameters view (IMSPARMR) is a real-time view that shows the IMS parameters that are in effect for the specified IMS system.

You can hyperlink to the IMSPARMR view from the:

- Parameters option in the DBCTL Dashboard Menu (DBCMDASH)
- IMS Parameters option in the IMS Information Menu (IMSMINFO)
- Parameters option in the IMS System Menu (EZIMSS)

The IMS Parameters view (IMSPARMR) lets system programmers easily determine the current value for parameters. The view eliminates the confusion that can occur
when parameter overrides cause IMS to start with values that are different from the
parameters that are specified in the IMS.PROCLIB members DFSPBxxx, DFSCGxxx,
DFSDFxxx, and DFSDCxxx. Some system configuration parameters are also
displayed in the IMSPARMR view.

You can press the Help key from anywhere within the view to access an index with
links to definitions of the parameters.

If an alphabetic or alphanumeric parameter option is not specified in IMSPARMR
and the parameter has no default value in the control block, the parameter field is
blank.

If a zero is displayed for a numeric parameter, one of the following statements is
true:

■ Zero is the specified option.

■ The option is not specified and one of the following statements is true:
   — The parameter has no default value, or the default value is zero.
   — The default value is nonzero, but the default value is not reflected in the
     parameter control block.
For more information about the parameters and for explanations of the abbreviated settings for parameters, see the IBM IMS installation documentation.

Figure 126: IMS Parameters view (IMSPARMR)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACBIN64</td>
<td>0</td>
<td>(blank) ALOT</td>
</tr>
<tr>
<td>AOIP</td>
<td>2047M</td>
<td>AOIS</td>
</tr>
<tr>
<td>AOSLOG</td>
<td>N</td>
<td>APPC</td>
</tr>
<tr>
<td>APPCLU</td>
<td>N</td>
<td>APPCMAX/A-Conv</td>
</tr>
<tr>
<td>APPCSE</td>
<td>F</td>
<td>APPLID1</td>
</tr>
<tr>
<td>APPLID3</td>
<td>(blank)</td>
<td>ARMSRST</td>
</tr>
<tr>
<td>ASOT</td>
<td>60</td>
<td>AUTO</td>
</tr>
<tr>
<td>AUTOIMPORT</td>
<td>MODBLKS BSIZ</td>
<td>4096 CHTS</td>
</tr>
<tr>
<td>CIOP</td>
<td>2047M</td>
<td>CMDMCS</td>
</tr>
<tr>
<td>CLOG</td>
<td>150000</td>
<td>CRC</td>
</tr>
<tr>
<td>CSLG</td>
<td>(blank)</td>
<td>DBBF</td>
</tr>
<tr>
<td>DBLEVEL</td>
<td>I14EDBRC DBWR</td>
<td>24576 DC</td>
</tr>
<tr>
<td>DCNUM</td>
<td>Y</td>
<td>DFSDF</td>
</tr>
<tr>
<td>DNUM</td>
<td>I14EDLS DLPSB</td>
<td>102400 DLST</td>
</tr>
<tr>
<td>DM6</td>
<td>98304</td>
<td>DPTY</td>
</tr>
<tr>
<td>DMB</td>
<td>2047M</td>
<td>EMHL</td>
</tr>
<tr>
<td>DMBSIZE</td>
<td>1024M</td>
<td>FWP</td>
</tr>
<tr>
<td>ENC_SERIAL_PGM</td>
<td>(blank)</td>
<td>GRNAME</td>
</tr>
<tr>
<td>GSTSAREA</td>
<td>(blank)</td>
<td>GSTSDB</td>
</tr>
<tr>
<td>HIOP</td>
<td>2047M</td>
<td>HSBDID</td>
</tr>
<tr>
<td>IMPORTERR</td>
<td>ABORT IMSGROUP</td>
<td>IMFDTMA IMSID</td>
</tr>
<tr>
<td>INPUT</td>
<td>(blank)</td>
<td>IOFVI</td>
</tr>
<tr>
<td>IRLMM</td>
<td>I14E</td>
<td>ISIS</td>
</tr>
<tr>
<td>LMGSR5S</td>
<td>6000</td>
<td>LGNR</td>
</tr>
<tr>
<td>LS0</td>
<td>S</td>
<td>LTERM</td>
</tr>
<tr>
<td>LUMP</td>
<td>2047M</td>
<td>MAXPSRT</td>
</tr>
<tr>
<td>MSDB</td>
<td>C</td>
<td>MSG2291</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**DBCTL Dashboard Menu (DBCMDASH)**

The DBCTL Dashboard Menu (DBCMDASH) is the starting point for navigating to specific IMS system status information.
When you hyperlink to the DBCTL Dashboard Menu from the IMS ID field in the DBCTL Dashboard view, the menu is filtered on the IMS subsystem that is shown in the DBCTL Dashboard view.

**Figure 127: DBCTL Dashboard Menu (DBCMDASH)**

When you hyperlink to the menu from the IMS Name field in the IMS General Information view, the menu is filtered on the IMS subsystem that is shown in the IMS General Information view.

**Figure 128: IMS General Information Menu (IMSMINFO)**

The IMS General Information Menu (IMSMINFO) is the starting point for navigating to specific IMS system status information.

When you hyperlink to the menu from the IMS Name field in the IMS General Information view, the menu is filtered on the IMS subsystem that is shown in the IMS General Information view.

**IMS General Information Menu (IMSMINFO)**

The IMS General Information Menu (IMSMINFO) is the starting point for navigating to specific IMS system status information.
IMS User Exits view (IUXTSUMR)

The IMS User Exits view (IUXTSUMR) displays statistics about the user exits that are defined in the USER_EXITS section of the DFSDFxxx proclib member.

You can hyperlink to the IUXTSUMR view from EZIMSS.

IUXTSUMR provides information that includes:

- The exit routine type
- The number of calls to the exit routine since the last refresh
- The date and time that the exit routine module was last refreshed
- The size of the exit routine

On the view, you can:

- Restrict the displayed user exits to one type of exit by adding a type to the IUXTSUMR command. For example, IUXTSUMR RESTART displays only user exits with a type of RESTART.

- Refresh a user exit by using the REF line command next to an entry in the display. Any change you made to the exit in the DFSDFxxx proclib member (including deleting it) is refreshed in the system.

**Note**

The view and commands are designed to work with Version 13 or later of the IBM IMS system.

Figure 129: IMS User Exits view (IUXTSUMR)

```
19AUG2013 11:39:33 ------ MAINVIEW WINDOW INTERFACE (V6.1.00) ---------------
COMMAND ===> SCROLL ===> CSR
CURR WIN ===> 1 ALT WIN ===>
>M1 -IUXTSUMR=**********13HS1C=*19AUG2013==11:32:20==MVIMS======0==
CMD ExitName ExitType Calls Address Date Time Exit Version
--- --- ExitName ExitType Number Load Refresh Refresh Exit Version
DFSITRX1 INITTERM 1 2C86C238 17APR2013 05:29:29.64 96 DFSITRX1+
DFSITRX0 INITTERM 1 2C86C000 17APR2013 05:29:29.64 568 DFSITRX0+
DFSRSTX1 RESTART 2 2F6462AB 17APR2013 05:29:29.67 96 DFSRSTX1+
DFSRSTX0 RESTART 2 2F646000 17APR2013 05:29:29.67 680 DFSRSTX0+
```

No hyperlinks are available on the view.
Monitor region/thread activity

Use the region/thread views to monitor the activity of DBCTL threads and BMP and JBP regions running under the target system.

Monitor region/thread activity overview

You can use the region/thread views to answer the following questions:

■ What region/thread activity is occurring?
■ What work is IMS performing for currently processing transactions?
■ What is the activity of a transaction?

With the region/thread views, you can monitor the activity of groups of IMS regions and threads from one IMS subsystem or from multiple IMS subsystems.

The following region/thread activity views are provided:

■ “Region/Thread Activity Summary view (DRGNSUMR)” on page 213
■ “Region/Thread Activity Detail view (DRGNDTLR)” on page 215
■ “Region/Thread Activity Timing view (DRGNTIMR)” on page 217
■ “Region/Thread DL/I Activity view (DRGNDLIR)” on page 218
■ “Region/Thread Fast Path Activity view (DRGNFPLR)” on page 219
■ “Region/Thread Program view (DRGNPGMR)” on page 220
■ “Region/Thread Program Isolation Activity view (DRGNPILR)” on page 222
■ “Region DB2 Detail view (IRGNDB2R)” on page 223
■ “Region MQ Detail view (IRGNMQR)” on page 224
Tip

To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

---

Access the region views

You can access a filtered version of the region views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS Operations Menu (EZIOPSR)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and selecting the view from the VIEWS list, or by entering REGION on the COMMAND line and selecting a view from the list of region views.

For more specific information about hyperlinks to the region views, see the sections that describe the views.

Region/thread views commands

The region/thread views offer primary and line commands.

Primary command

The region/thread views and menus support the IMSCMDS primary command.

Primary commands are entered on the COMMAND line.

The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.
Line commands

The following table lists the actions available as line commands in the line command area of the region/thread tabular views and beside the **Region ID** field in the DRGNDTLR, DRGNTIMR, DRGNFPLR, and DRGNPILR views.

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| P            | Stop a region  
  Issues the IMS /STOP REGION command to stop a region or thread |
| PA           | Stop a region with an ABDUMP  
  Issues the IMS /STOP REGION ABDUMP command to abnormally terminate a region or thread with a dump |
| DT           | Display a detail trace for a region  
  Accesses the Detail Trace Data dialog for a region if the region is not idle and a trace is active for the region (and if the user is authorized to view detail trace extended data) |

**Note**
The P and PA line commands require implementation of the MainView AutoOPERATOR product for IMS.

Region/Thread Activity Summary view (DRGNSUMR)

The Region/Thread Activity Summary view (DRGNSUMR) is a good starting place for monitoring dependent regions and threads.

The DRGNSUMR view provides information about active regions and threads and the transactions that are currently executing. The DRGNSUMR view provides information about BMP and JBP regions and DBCTL threads. It identifies a region type as a BMP or JBP region or as a CICS thread (DBT) or an ODBA thread (ODB).

For DBCTL CICS threads (DBT), the view provides the associated CICS name and task and the UOW elapsed time. Total DL/I and SQL calls are also shown. SQL calls apply to BMPs and JBPs only, since threads cannot access DB2 through IMS.

Data is collected from the entire IMSplex environment so that you can monitor the activity of multiple IMS regions across one or more operating systems.
You can hyperlink to a filtered version of the DRGNSUMR view from most of the EZ menus, several object menus, and many other views.

**Figure 130: Region/Thread Activity Summary view (DRGNSUMR)**

<table>
<thead>
<tr>
<th>CM Rgn</th>
<th>IMS Rgn Region</th>
<th>CICS Tran</th>
<th>Curr UOW</th>
<th>UOW</th>
<th>Tot DLI</th>
<th>I/O</th>
<th>Lock</th>
<th>SQL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I11D DBT IDLE</td>
<td>IDLE</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I11D DBT IDLE</td>
<td>IDLE</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>DRGNMR Region/Thread Menu for DBT or ODB region types or IRGNMR Region Menu for all other region types</td>
</tr>
<tr>
<td>Rgn Typ</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types</td>
</tr>
<tr>
<td>CICS Task</td>
<td>the MainView for CICS product TASKXPND service, if MainView for CICS is installed, the region status is not IDLE, and there is a value in the field</td>
</tr>
<tr>
<td>Curr IWAIT or UOW CPU</td>
<td>Region/Thread Activity Timing view (DRGNTIMR) for DBT or ODB region types or the Region Activity Timing view (IRGNTIMR) for all other region types</td>
</tr>
<tr>
<td>Total DLI</td>
<td>Region/Thread DL/I Activity view (DRGNDLIR) for DBT or ODB region types or Region DL/I Activity view (IRGNDLIR) for all other region types</td>
</tr>
<tr>
<td>Total Lock (for PI)</td>
<td>For a region or thread with a WT-PI status, the PI Region Lock List view (IPIRGLST), which shows which PI resource the region or thread is waiting for and which regions or threads are holding the resource</td>
</tr>
<tr>
<td></td>
<td>For a region or thread in any status other than WT-PI, the Region/Thread Program Isolation Activity view (DRGNPILR) for DBT or ODB region types or the Region Program Isolation Activity view (IRGNPILR) for all other region types</td>
</tr>
</tbody>
</table>

DRGNDLIR and IRGNDLIR provide DL/I call information for the selected region or thread.

DRGNPILR and IRGNPILR provide information about the PI activity of the selected region or thread.
The Region/Thread Activity Detail view (DRGNDTLR) provides detailed thread or region information. The view shows what a thread or BMP/JMP region is doing.

You can determine:

- Which databases the thread or region accesses and how often
- How many times a thread or region accesses a database and with what type of DL/I call
- Elapsed time, IWAIT time, and CPU utilization for the region
- The number of locks held by a BMP or JBP region between checkpoints
- The transaction’s resource usage

You can hyperlink to the DRGNDTLR view from:

- Several IRLM (ILK*) views
- Region Detail option in the DRGNMR Region/Thread Menu
- **Rgn Typ** field (for a DBT or ODB region type) in the DRGNSUMR, DRGNPGMR, IRGNSUMR, and DRGNPGMR views
- **Rgn ID** field in the DRGOCC/DRGOCCR view

**Figure 131: Region/Thread Activity Detail view (DRGNDTLR)**

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Elap</strong></td>
<td>Region/Thread Activity Timing view (DRGNTIMR), which provides detailed timing information for regions and threads</td>
</tr>
<tr>
<td><strong>CICS Task</strong></td>
<td>MainView for CICSTASKXPND service, if MainView for CICS is installed, the region status is not IDLE, and there is a value in the field</td>
</tr>
<tr>
<td><strong>Current/Last DL/I Call</strong></td>
<td>DL/I Call Status view (IDLIST), which provides details about the last DL/I call issued by the selected region</td>
</tr>
<tr>
<td><strong>Current Lock Contention (PI)</strong></td>
<td>PI Region Lock Wait List view (IPIRGWT), which shows either the regions or threads waiting for locks held by this region or thread or the holders of locks required by the region or thread</td>
</tr>
<tr>
<td><strong>Current Lock Detail (IRLM)</strong></td>
<td>for a region or thread with a WT-ILRM status, the IRLM Region Lock List view (ILKRGLST), filtered to show only the regions or threads that are waiting for or holding the resource that this region/thread is waiting for</td>
</tr>
<tr>
<td></td>
<td>For a region or thread with any status other than WT-IRLM, the ILKRGLST view, filtered to show the resources that are held by the region or thread</td>
</tr>
<tr>
<td><strong>DB2 Corrid</strong></td>
<td>MainView for DB2 DB2ST service, if MainView for DB2 is installed and there is a value in the field</td>
</tr>
<tr>
<td><strong>DB2 Name</strong></td>
<td>MainView for DB2 DB2ST service, if MainView for DB2 is installed and there is a value in the field</td>
</tr>
<tr>
<td><strong>Lock Detail</strong></td>
<td>Region/Thread Fast Path Activity view (DRGNFPLR), which shows Fast Path call activity for the transaction currently processing in the region or thread (if there is Fast Path activity)</td>
</tr>
</tbody>
</table>

The following hyperlinks (listed alphabetically) are provided:
<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQ accessed</td>
<td>Region MQ Detail view (IRGNMQR), which shows activity and status for each MQ subsystems being accessed by the current transaction</td>
</tr>
<tr>
<td>PI Activity (if not N/A)</td>
<td>Region/Thread Program Isolation Activity view (DRGNPILR), which shows the region/thread program isolation statistics for the transaction that is currently running</td>
</tr>
<tr>
<td>SQL Total</td>
<td>MainView for DB2 DUSER service, if MainView for DB2 is installed and there is a value in the field</td>
</tr>
<tr>
<td>Total Calls</td>
<td>Region/Thread DL/I Activity view (DRGNDLIR), which shows the amount of DL/I activity incurred by the transaction currently executing</td>
</tr>
</tbody>
</table>

**Region/Thread Activity Timing view (DRGNTIMR)**

The Region/Thread Activity Timing view (DRGNTIMR) provides detailed timing information for a thread's current UOW or for the currently executing BMP or JBP.

The view divides a transaction's elapsed time into the following major categories: DL/I DB, DL/I OPEN, SYNC POINT, ESS, and APPLICATION. Within the major elapsed time categories, the view provides IWAIT times for the significant IWAITs categories and IWAIT times for miscellaneous IWAITs.

The CURRENT EVENT TIMING section shows the elapsed time of the currently active event and of any current IWAIT. The TOTAL EVENT TIMING section shows the elapsed times and IWAIT times for completed events within the life of the transaction.

The availability of elapsed and IWAIT times displayed in the view is controlled by the ETIMEELP and ETIMEIWT parameters in BBPARM member IMFECPP00. (The parameters are set by default to collect the data. For information about IMFECPP00, see the *MainView for IMS and MainView for DBCTL Customization Guide*. To determine the current setting of the parameters, use the IECPSUMR view.)

The CPU TIMING section shows the CPU used by the UOW, BMP, or JBP. The availability of CPU data displayed in the view is controlled by the CPU parameter in BBPARM member IMFECPP00.

You can hyperlink to the DRGNTIMR view from the:

- **Curr IWAIT** field and **Tran CPU** or **UOW CPU** field (for a DBT or ODB region type) in the DRGNSUMR and IRGNSUMR views
- Active Elap field (for a DBT or ODB region type) in the DRGNDTLR and IRGNDTLR views
- Region Timing Detail option in the DRGNMR Region Menu (DRGNMR)

**Figure 132: Region/Thread Activity Timing view (DRGNTIMR)**

<table>
<thead>
<tr>
<th>09APR2013 12:27:45</th>
<th>MAINVIEW WINDOW INTERFACE (V6.1.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND ==</td>
<td>SCROLL ==</td>
</tr>
<tr>
<td>Curr Win ==</td>
<td>1</td>
</tr>
<tr>
<td>&gt;W1 =DRGNTIMR====<em>I13H51CT=</em>==09APR2013==12:27:45====MVIMS====D====1</td>
<td></td>
</tr>
<tr>
<td>Region/Thread Event and CPU Timing</td>
<td></td>
</tr>
<tr>
<td>Region ID..</td>
<td>7</td>
</tr>
<tr>
<td>Jobname....</td>
<td>I13HMP4</td>
</tr>
<tr>
<td>IMS ID......</td>
<td>I13H</td>
</tr>
<tr>
<td>MVS Name...</td>
<td>SJSC</td>
</tr>
<tr>
<td>DB Shr Grp.</td>
<td>IMSHR3D</td>
</tr>
<tr>
<td>DBQ Waiting</td>
<td>N</td>
</tr>
<tr>
<td><strong>-----------------</strong></td>
<td><strong>-----------------</strong></td>
</tr>
<tr>
<td><strong>CURRENT EVENT TIMING</strong></td>
<td><strong>TOTAL EVENT TIMING</strong></td>
</tr>
<tr>
<td>Active Elap</td>
<td>0.0000</td>
</tr>
<tr>
<td>IWAIT Elap</td>
<td>0.0000</td>
</tr>
<tr>
<td><strong>-----------------</strong></td>
<td><strong>-----------------</strong></td>
</tr>
<tr>
<td><strong>TOTAL EVENT TIMING</strong></td>
<td><strong>SYNC POINT</strong></td>
</tr>
<tr>
<td>Elap Time..</td>
<td>0.0000</td>
</tr>
<tr>
<td>VSSM IWAIT.</td>
<td>0.0000</td>
</tr>
<tr>
<td>OSAM IWAIT.</td>
<td>0.0000</td>
</tr>
<tr>
<td>DEDB IWAIT.</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided in the DRGNTIMR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>CICS Task</td>
<td>MainView for CICSTASKXPND service, if MainView for CICS is installed, the region status is not IDLE, and there is a value in the field</td>
</tr>
<tr>
<td>MQs accessed</td>
<td>Region MQ Detail view (IRGNMQR), which shows activity and status for each MQ subsystem being accessed by the current transaction</td>
</tr>
</tbody>
</table>

**Region/Thread DL/I Activity view (DRGNDLIR)**

The Region/Thread DL/I Activity view (DRGNDLIR) displays the amount of DL/I call activity incurred by a thread's current UOW (unit of work) or by a currently executing BMP or JBP.

The DRGNDLIR view shows the total number of DL/I database calls issued against a database by a thread UOW or by a BMP or JBP. Separate totals are provided for GET UNIQUE, GET NEXT, GET HOLD UNIQUE, GET HOLD NEXT, GET NEXT within PARENT, GET HOLD NEXT within PARENT, REPLACE, INSERT, and DELETE calls. The view also shows the average read and write times and the total number of key reads and writes and non-key reads and writes.

You can hyperlink to the DRGNDLIR view from the:
- **Total DLI** field (for a DBT or ODB region type) in the DRGNSUMR and IRGNSUMR views

- **Total Calls** field in the DRGNNDLTR view

**Figure 133: Region/Thread DL/I Activity view (DRGNDLIR)**

<table>
<thead>
<tr>
<th>Database DD</th>
<th>Tran</th>
<th>Total GU</th>
<th>GN</th>
<th>GHN</th>
<th>GNP</th>
<th>GHNP</th>
<th>REPL</th>
<th>ISRT</th>
<th>DLET</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVPDB3</td>
<td>--------</td>
<td>IIVTFD</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>--------</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPDB4</td>
<td>--------</td>
<td>IIVTFM</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>--------</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

## Region/Thread Fast Path Activity view (DRGNFPLR)

The Region/Thread Fast Path Activity view (DRGNFPLR) displays the region Fast Path call activity for the transaction currently processing in the selected region/thread.

The DRGNFPLR view shows the first ten Fast Path database enqueues held by the selected region/thread. Each record shows the Fast Path database area being accessed by the transaction, the enqueue type, and the RBA/ENQ for the IMS resource being locked.
You can hyperlink to the DRGFNFPLR view from the Lock Detail field in the DRGNFTLR view.

Figure 134: Region/Thread Fast Path Activity view (DRGFNFPLR)

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>CICS Task</td>
<td>MainView for CICSTASKXPND service, if MainView for CICS is installed, the region status is not IDLE, and there is a value in the field</td>
</tr>
<tr>
<td>MQs accessed</td>
<td>Region MQ Detail view (IRGNNMQR), which shows activity and status for each MQ subsytems being accessed by the current transaction</td>
</tr>
</tbody>
</table>

Region/Thread Program view (DRGNPGMR)

The Region/Thread Program view (DRGNPGMR) provides information about active regions and threads, the transactions that are currently executing, and the associated application program.
Data is collected from the entire IMSplex environment so that you can monitor the activity of multiple IMS regions/threads across one or more operating systems.

Figure 135: Region/Thread Program view (DRGNPGMR)

<table>
<thead>
<tr>
<th>Command</th>
<th>09APR2013 12:42:45</th>
<th>MAINVIEW WINDOW INTERFACE (V6.1.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COMMAND =&gt;</td>
<td>SCROLL =&gt; CSR</td>
</tr>
<tr>
<td>CURR WIN</td>
<td>1</td>
<td>ALT WIN =&gt;</td>
</tr>
<tr>
<td>&gt;M1 =DRGNPGMR=========I13H51CT=*========09APR2013==12:42:45====MVIMS======D======0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Related Views</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region Status</td>
<td>Waiting Regions</td>
<td>BMP/JBP Regions</td>
</tr>
<tr>
<td>Region Occupancy</td>
<td>DBT Regions</td>
<td>All Region Types</td>
</tr>
<tr>
<td>Region/Thd Summary</td>
<td>ODB Regions</td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>DRGNMR Region/Thread Menu for DBT or ODB region types or IRGNMR Region Menu for all other region types</td>
</tr>
<tr>
<td>Rgn Typ</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types</td>
</tr>
<tr>
<td>Msgs Qued</td>
<td>One of the following views is displayed:</td>
</tr>
<tr>
<td></td>
<td>- Transaction Overview view (ITRSUMR), which shows scheduling status, parameter status, and region statistics for transactions</td>
</tr>
<tr>
<td></td>
<td>- Shared Input Messages by Queue Name view (ISQINR), which shows shared message queue structure data summarized by individual queue</td>
</tr>
<tr>
<td></td>
<td>- Messages by Queue Name view (ISQNAMER), which shows shared message queue structure data</td>
</tr>
<tr>
<td>Total DL/I</td>
<td>Region/Thread DL/I Activity view (DRGNDLIR) for DBT or ODB region types or Region DL/I Activity view (IRGNDLIR) for all other region types</td>
</tr>
<tr>
<td>Total SQL</td>
<td>The MainView for DB2 product DUSER service, if MainView for DB2 is installed and there is a value in the field</td>
</tr>
<tr>
<td>Hyperlink from</td>
<td>To access</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Total Lck (for PI)</strong></td>
<td>For a region or thread with a WT-PI status, the PI Region Lock List view (PIRGLST), which shows which PI resource the region or thread is waiting for and which regions or threads are holding the resource. For a region or thread in any status other than WT-PI, the Region/Thread Program Isolation Activity view (DRGNPILR) for DBT or ODB region types or the Region Program Isolation Activity view (IRGNPILR) for all other region types. DRGNPILR and IRGNPILR provide information about the PI activity of the selected region or thread.</td>
</tr>
<tr>
<td><strong>Total Lck (for IRLM)</strong></td>
<td>For a region or thread with a WT-ILRM status, the IRLM Region Lock List view (ILKRGLST), filtered to show only the regions or threads that are waiting for or holding the resource this region or thread is waiting for. For a region or thread with any status other than WT-IRLM, the ILKRGLST view, showing the resources that are held by the region or thread.</td>
</tr>
<tr>
<td><strong>Tot MQ</strong></td>
<td>The Region MQ Detail view (IRGNMQR), which shows the MQ subsystems being accessed by the current transaction.</td>
</tr>
<tr>
<td><strong>CICS Task</strong></td>
<td>the MainView for CICS product TASKXPND service, if MainView for CICS is installed, the region status is not IDLE, and there is a value in the field.</td>
</tr>
</tbody>
</table>

### Region/Thread Program Isolation Activity view (DRGNPILR)

The Region/Thread Program Isolation Activity view (DRGNPILR) provides the region program isolation (PI) statistics for a selected unit of work (UOW) or BMP or JBP region.

The statistics show you the amount and type of segment-locking activity an application is performing.

You can hyperlink to the DRGNPILR view from the:

- **Tot Lock** field (for a DBT or ODB region type) in the DRGNSUMR and IRGNSUMR views
PI activity field in the DRGNDTLR view

**Figure 136: Region/Thread Program Isolation Activity view (DRGPNPLR)**

<table>
<thead>
<tr>
<th>Region ID</th>
<th>Jobname</th>
<th>Tran ID</th>
<th>UOW Elapsed</th>
<th>Idle Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>I13HMP4</td>
<td></td>
<td>0.0000</td>
<td>346.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MVS Name</th>
<th>DB2 AuthID</th>
<th>CICS Target</th>
<th>DB2 accessed</th>
<th>CICS UOW</th>
<th>N/A</th>
<th>CICS Task</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJSC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region Type</th>
<th>MQ accessed</th>
<th>N</th>
<th>CICS UOW</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DBQ Waiting</th>
<th>---TEST---</th>
<th>Enqueue</th>
<th>Dequeue</th>
<th>Cur Enqueue</th>
<th>Wait</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>---TEST---</td>
<td>0 Enqueue</td>
<td>0 Dequeue</td>
<td>0 Cur Enqueue</td>
<td>0 Wait</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided in the DRGPNPLR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn Status (for PI)</td>
<td>ILKRGLST IRLM Region Lock List view, if the status is WT-IRLM, or the Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types</td>
</tr>
<tr>
<td>Rgn Status (for IRLM)</td>
<td>IPIRGLST PI Region Lock List view, if the status is WT-PI, or the Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types</td>
</tr>
<tr>
<td>CICS Task</td>
<td>MainView for CICS TASKXPND service, if MainView for CICS is installed and there is a value of DBT in the field</td>
</tr>
<tr>
<td>MQs accessed</td>
<td>Region MQ Detail view (IRGNMQR), which shows activity and status for each MQ subsytems being accessed by the current transaction</td>
</tr>
<tr>
<td>Wait (SHR/UPD)</td>
<td>IPIRSWT PI Statistics view, if there is a value in the field</td>
</tr>
<tr>
<td>Wait (EXCLUSIVE)</td>
<td>IPIRSWT PI Statistics view, if there is a value in the field</td>
</tr>
<tr>
<td>Wait (Q COMMAND)</td>
<td>IPIRSWT PI Statistics view, if there is a value in the field</td>
</tr>
</tbody>
</table>

**Region DB2 Detail view (IRGNDB2R)**

The Region DB2 Detail view (IRGNDB2R) provides information about each DB2 subsytems being accessed by the current transaction (one subsystem per row).

You can hyperlink to the IRGPNPLR view from the:
- **Tot SQL** field in the IRGNSUMR, DRGNSUMR, IRGNPGMR, and DRGNPGMR views

- **DB2 accessed** field in the IRGNDTLR, DRGNDTLR, IRGFPLR, IRGNPLR, IRGNTIMR, DRGFPLR, DRGNPLR, and DRGNTIMR views

### Figure 137: Region DB2 Detail view (IRGNDB2R)

<table>
<thead>
<tr>
<th>Region DB2 Detail</th>
<th>09APR2013 13:57:26</th>
<th>COMMAND =&gt;</th>
<th>CRUN WIN =&gt; 1</th>
<th>ALT WIN =&gt;</th>
<th>SCROLL =&gt; CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Region DB2 Detail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>ID</td>
<td>Name</td>
<td>DB2</td>
<td>IMS</td>
<td>Rgn</td>
</tr>
<tr>
<td>DB2A</td>
<td>IMSA</td>
<td>001</td>
<td>SON</td>
<td>PLANA</td>
<td>3</td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 Name</td>
<td>The MainView for DB2 product Active Threads view (THDACTV), which displays information about each active thread</td>
</tr>
</tbody>
</table>

### Region MQ Detail view (IRGNMQR)

The Region MQ Detail view (IRGNMQR) provides information about each MQ subsystem being accessed by the current transaction (one subsystem per row).

You can hyperlink to the IRGNMQR view from the:

- **Tot MQ** field in the IRGNSUMR, DRGNSUMR, IRGNPGMR, and DRGNPGMR views

- **MQ accessed** field in the IRGNDTLR, DRGNDTLR, IRGFPLR, IRGNPLR, IRGNTIMR, DRGFPLR, DRGNPLR, and DRGNTIMR views

### Figure 138: Region MQ Detail view (IRGNMQR)

<table>
<thead>
<tr>
<th>Region MQ Detail</th>
<th>09APR2013 14:00:34</th>
<th>COMMAND =&gt;</th>
<th>CRUN WIN =&gt; 1</th>
<th>ALT WIN =&gt;</th>
<th>SCROLL =&gt; CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Region MQ Detail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>ID</td>
<td>Name</td>
<td>MQ</td>
<td>IMS</td>
<td>Rgn</td>
</tr>
<tr>
<td>MQA</td>
<td>IMSA</td>
<td>001</td>
<td>SON</td>
<td>PLANA</td>
<td>1</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Region/Thread Menu (DRGNMR)

The DRGNMR Region/Thread Menu (DRGNMR) is an object menu for a selected thread.

From the DRGNMR menu, you can access more detailed information about the thread.

You can hyperlink to the DRGNMR menu from the Rgn ID field (for a DBT or ODB region type) in the DRGNSUMR, IRGNSUMR, DRGNPGMR, and IRGNPGMR views.

Figure 139: Region/Thread Menu (DRGNMR)

15APR2007 08:40:23 ----- MainView WINDOW INTERFACE (Vx.x.xx) --------------
COMMAND ===> SCROLL ===> CSR
CURR WIN ===> 1 ALT WIN ===>
W1 -DRGNMR-------------I9XDC1-------------15APR2007==08:40:22====MVIMS==D== -->
Region/Thread Menu
Timeframe - Realtime

Region Name -> I9XDC1
ID -> 4
IMS ID -> X71D
MVS Name -> SJSC

Region Information
. Region Occupancy
. Region Detail
. Region Lock Detail
. Region Timing Detail

View Criteria
. All Region Types
. DBT Regions
. BMP Regions
. Detail Trace Display

From the DRGNMR menu, you can hyperlink to:

- Region-related information
- View criteria that allow you to filter your view
- Utilities that you can use to change targets, change timeframes, and issue IMS commands
Analyze program isolation lock contention

Use the program isolation (PI) lock views to quickly analyze and resolve PI resource contention problems.

Program isolation lock contention analysis overview

You can use the program isolation views to answer the following questions:

- Is there a contention problem?
- How severe or widespread is the problem?
- Which resources are most contended for?
- How can I resolve the contention problem?

Four of the program isolation views (IPIRGLST, IPIRGWT, IPIRSWT, and IPIRSSUM) can be used for extensive analysis of PI lock contention. The other view (IPISTAT) shows overall PI resource use.

The PI Region Lock List view (IPIRGLST) shows the regions that are contending for PI locks, identifies the resource that each waiting region is waiting for, and provides a list of "ultimate" holders that are causing lock contention.

The ultimate holder is not necessarily the immediate holder of a lock, which may itself be in a PI wait. The ultimate holder is the thread at the end of the wait chain. You can issue a line command in the IPIRGLST view to terminate the ultimate holder region if you decide that doing so is warranted.
Analyze lock problems

To analyze lock problems, start with the PI Region Lock Wait List view (IPIRGWT). The IPIRGWT view displays a list of all regions that are waiting for a resource lock, and it provides information about the resource and the region causing the lock contention. The view is sorted by descending wait time to highlight waiting regions that are most impacted.

You can determine the cause of a wait by examining the ultimate holder information in the IPIRGWT view. If there is only one ultimate holder, its region ID and jobname are displayed.
Note
If a waiting region has requested an exclusive lock for a resource held by several regions with shared locks, there will be multiple ultimate holders in the Cnt Ult field. In that case, you should hyperlink from the Cnt Ult field to access the PI Region Lock List view (IPIRGLST), which lists the ultimate holders of a resource.

The resource in contention is identified in the IPIRGWT Database Name field (to the right in the view). You may need to know how many other regions are waiting for the resource to understand the impact of the resource contention. You can hyperlink on the Database Name field to access a list of all regions waiting for the resource in the PI Resource Lock Wait List view (IPIRSWT).

A resource wait cannot be resolved until the ultimate holder region releases the resource. The resource might not be released until the program issues its next sync point, which may be when the program finishes execution. If you have the MainView AutoOPERATOR product for IMS implemented, you can issue the P or PA command from the IPIRGWT view to stop the ultimate holder region, but you should determine the impact of doing so before you proceed.

To determine the impact of stopping an ultimate holder region, check the Ultimate Held field on the IPIRGLST view to find out how many resources are being held by the region. If the number is low, stopping the region will have less impact. If the number is high, you should consider increasing the region’s performance level so that it can complete processing sooner, rather than issuing a stop region command.

Note
For more information about the P and PA actions, see “Line commands” on page 231.

---

**Ultimate lock holder**

The ultimate holder of a program isolation lock is one of the following holders:

- A region holding the lock required by another region
- A region holding the lock required by a waiting region that is holding a different lock required by another waiting region

**Example**

Region 1 is running and holds lock A
Region 2 is waiting for lock A
Region 1 is the ultimate holder of the lock required by Region 2.
Example
Region 1 is running and holds lock A
Region 2 is waiting for lock A and holds lock B
Region 3 is waiting for lock B
Region 1 is the ultimate holder of the lock that must be freed before Region 2 and Region 3 can continue processing.

The ultimate holder of a lock is significant because the ultimate holder must release the lock before other work can proceed. The ultimate holder can release the lock either by:

- Completing normally
- Completing expeditiously (influenced by operations control or by an increase in the region’s performance level)
- Being stopped with a P or PA region stop line command (see “Line commands” on page 231)

Before you use a stop command on an ultimate region to free a lock, you should consider the amount of time that backout processing will take as a result of the stop command. If the region is an errant BMP, stopping the region may take longer than allowing processing to complete.

In example 2, neither Region 3 nor Region 2 will continue processing until Region 1 releases lock A, and you cannot cause Region 2 to release its lock without terminating the IMS control region. Region 1 is the cause of the problem, and the only way to solve the problem is to influence the processing of Region 1, the ultimate lock holder.

Note
There may be more than one ultimate holder of a lock when regions hold shared locks and the requester requires an exclusive lock.

Access the program isolation lock views

You can access a filtered version of the program isolation lock views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering PI on the COMMAND line and then selecting a view from the list of program isolation lock views. For more specific information about hyperlinks to the PI lock views, see the sections that describe the views.

## Line commands

The following line commands are available on the program isolation lock views with a line command area:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| **P**        | Stop a region  
Issues the IMS /STOP REGION command to stop a region or regions.  
If you issue the P command on a line in the IPIRGLST view, it stops only the region listed on that line.  
If you issue the P command on a line in the IPIRSWT or IPIRGWT lock wait list view, it stops all ultimate regions that hold a resource needed by the waiting region. |
| **PA**       | Stop a region with an ABDUMP  
Issues the IMS /STOP REGION ABDUMP command to abnormally terminate a region or regions with a dump.  
If you issue the command on a line in the IPIRGLST view, it abdumps only the region listed on that line.  
If you issue the command on a line in the IPIRSWT or IPIRGWT lock wait list view, it abdumps all ultimate regions that hold a resource needed by the waiting region. |

---

**Note**

Line commands require implementation of MainView AutoOPERATOR for IMS.

---

## PI Region Lock List view (IPIRGLST)

The PI Region Lock List view (IPIRGLST) provides information about regions waiting for program isolation locks and the cause for the wait.
The view sorts waiting regions by wait time and lists the regions with the longest wait times at the top.

The IPIRGLST view has one row for each waiter region. That row shows the resource that the region is waiting for. Each waiter region row is followed by one or more rows that describe the ultimate holder of the lock.

**Note**

You can use the P and PA region stop line commands in the IPIRGLST view to stop an individual region if you decide that stopping a region is the best course of action to end a resource contention (see “Line commands” on page 231).

When you access the IPIRGLST view by hyperlinking from the Cnt Ul field in the IPIRGWT view, the information is filtered by the selected region. You can also hyperlink to the IPIRGLST view from the:

- Regions Holding option in the IMS System Menu (EZIMSS)
- Holding Regions option in the program isolation menu (IPIMS)
- Tot Lock field in the IRGNSUMR and IRGNPGMR region activity views
- Status field in the Region Program Isolation Activity View (IRGNPILR)
- Region Lock Detail option in the IRGNMR Region Menu

![Figure 140: PI Region Lock List view (IPIRGLST)](image)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiters ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the selected waiting region has completed up to now.</td>
</tr>
</tbody>
</table>
PI Region Lock Wait List view (IPIRGWT)

The PI Region Lock Wait List view (IPIRGWT) provides a list of all regions waiting for database resource locks and shows the ultimate holder of each resource in contention.

The IPIRGWT view is a good starting place for analyzing lock problems. The view highlights problems and shows their extent. (For more information about analyzing lock problems, see “Analyze lock problems” on page 228.)

Note

You can use the P and PA region stop line commands in the IPIRGWT view to stop all ultimate regions that hold a resource needed by a waiting region, if you decide that stopping regions is the best course of action to end a resource contention (see “Line commands” on page 231).

You can hyperlink to the IPIRGWT view from the:

- Database Lock Waits option in the IMS Easy Menu (EZIMS) and the IMS SSI Easy Menu (EZISSI)
- Regions Waiting option in the IMS System Menu (EZIMSS)
- Regions in Lock Wait option in the IMS Operations Menu (EZIOPSR) and the IMS DBA Easy Menu (EZIDBA).
- Locking field in the IMS Dashboard view (IMSDASHR)
- Locking Contention option in the IMS Dashboard Menu (IMSMDASH)
- **Regions in PI Wait** field in the IPISTAT view
- **Number Waiters** field in the IPIRSSUM view
- Regions in PI Wait in the PI Statistics menu (IPIMS)

**Figure 141: PI Region Lock Wait List view (IPIRGWT)**

27MAR2009 08:24:14 ------ MainView WINDOW INTERFACE (V6.0.00) ---------------
COMMAND ====> SCROLL ===> PAGE
CURR WIN ===> 1 ALT WIN ===>
>M1 =IPIRGWT==========I10X======*========27MAR2009==08:24:14====MVIMS====D====0
.
- Related Views
  - Resource Contention
  - Holding Regions
  - Database Contention
  - PI Statistics

<table>
<thead>
<tr>
<th>CMD</th>
<th>Rgn</th>
<th>Region</th>
<th>Rgn PSB</th>
<th>Tran</th>
<th>Wait Cnt</th>
<th>Ult</th>
<th>Ultimate</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>I9AAMP2</td>
<td>MPP</td>
<td>PHDAMINQ</td>
<td>THDAMINQ</td>
<td>418.1</td>
<td>1</td>
<td>6</td>
<td>I9APIWT2</td>
</tr>
<tr>
<td>5</td>
<td>I9APIWT3</td>
<td>BMP</td>
<td>PTEST02</td>
<td>GBGTRNB1</td>
<td>184.2</td>
<td>1</td>
<td>6</td>
<td>I9APIWT2</td>
</tr>
<tr>
<td>4</td>
<td>I9APIWT4</td>
<td>BMP</td>
<td>PTEST02</td>
<td>GBGTRNB1</td>
<td>183.7</td>
<td>1</td>
<td>6</td>
<td>I9APIWT2</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**PI Resource Lock Wait List view (IPIRSWT)**

The PI Resource Lock Wait List view (IPIRSWT) provides a list of all resources that regions are waiting to get locks for.

--- **Note**

You can use the P and PA region stop line commands in the IPIRSWT view to stop all ultimate regions that hold a resource needed by a waiting region, if you decide that stopping regions is the best course of action to end a resource contention (see “Line commands” on page 231).

Use the IPIRSWT view to display all resources that have regions waiting for them. You can hyperlink to the IPIRSWT view from:

- The Resource Contention option in the IMS System Menu (EZIMSS)
- Any of the three Wait fields in the Region Program Isolation Activity View (IRGNPILR)
- The **Database Name** field in the IPIRGWT and IPIRSSUM views
The Resource Contention option in the program isolation menu (IPIMS)

**Figure 142: PI Resource Lock Wait List view (IPIRSWT)**

<table>
<thead>
<tr>
<th>Command</th>
<th>=&gt; IPIRSWT</th>
<th>Scroll</th>
<th>=&gt; PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Win</td>
<td>=&gt; 1</td>
<td>ALTERNATE WIN</td>
<td>=&gt;</td>
</tr>
</tbody>
</table>

- **Related Views**
  - Regions in PI Wait
  - Holding Regions

<table>
<thead>
<tr>
<th>CMD</th>
<th>Database</th>
<th>Wait</th>
<th>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the selected waiting region has done up to now.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>DCB</td>
<td>RBA</td>
<td>Name</td>
</tr>
<tr>
<td>CUSTHDAM 01</td>
<td>00001A6C</td>
<td>184.9</td>
<td>5 I9APIWT3</td>
</tr>
<tr>
<td>CUSTHDAM 01</td>
<td>000013DA</td>
<td>184.4</td>
<td>4 I9APIWT4</td>
</tr>
<tr>
<td>CUSTHDAM 01</td>
<td>00001A6C</td>
<td>418.8</td>
<td>3 I9AMP2</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR), where you can access database I/O activity information at the level of the physical database</td>
</tr>
<tr>
<td>Waiter (Region) Jobname</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or the Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the selected waiting region has done up to now.</td>
</tr>
<tr>
<td>PSB Name</td>
<td>DLIST service, which provides details about the last DL/I call issued by the selected region</td>
</tr>
</tbody>
</table>

**PI Resource Lock Summary view (IPIRSSUM)**

The PI Resource Lock Summary view (IPIRSSUM) lists all database resources that are in contention.

Degree of contention is measured by the number of regions waiting (shown in the **Number Waiters** field).

You can hyperlink to the IPIRSSUM view from the:

- Database Contention option in the IMS System Menu (EZIMSS)
- Database Contentions option in the IMS DBA Easy Menu (EZIDBA)
Database Contention option in the program isolation menu (IPIMS)

Figure 143: PI Resource Lock Summary view (IPIRSSUM)

<table>
<thead>
<tr>
<th>Database Number</th>
<th>Name</th>
<th>Number Waiters</th>
<th>Holders</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTHDAM</td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>PI Resource Lock Wait List view (IPIRSWT), which shows the regions that are waiting for the selected resource</td>
</tr>
<tr>
<td>Number Waiters</td>
<td>PI Region Lock Wait List view (IPIRGWT), which shows the regions that are waiting for the selected resource</td>
</tr>
</tbody>
</table>

PI Statistics view (IPISTAT)

The PI Statistics view is a real-time or past interval detail view that shows dynamic and internal IMS program isolation pool and QCB statistics.

You can hyperlink to the IPISTAT view from the:

- PI Statistics option in the IMS System Menu (EZIMSS)
- **Pool** field in the IMS Dashboard view (IMSDASHR)

**Figure 144: PI Statistics view (IPISTAT)**

<table>
<thead>
<tr>
<th>27MAR2009 08:27:55</th>
<th>MainView WINDOW INTERFACE (V6.0.00)</th>
<th>SCROLL ===&gt; PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND ====&gt;</td>
<td>SCROLL ===&gt; PAGE</td>
<td></td>
</tr>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
<td></td>
</tr>
</tbody>
</table>

>W1 =IPISTAT========10X========*========27MAR2009==08:27:55====MVIMS====D====1

- **PI Statistics**

  **Related Views**
  - Regions in PI Wait
  - Holding Regions
  - Resource Contention
  - Database Contention

---

<table>
<thead>
<tr>
<th>------ DYNAMIC POOL ------</th>
<th>------ DYNAMIC QCBs ------</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Pool Size.........</td>
<td>65536 Current QCBs Allocated...</td>
</tr>
<tr>
<td>Increment Value...........</td>
<td>65536 Increment Value..........</td>
</tr>
<tr>
<td>Maximum Pool Size.........</td>
<td>1048576 Maximum QCBs...........</td>
</tr>
<tr>
<td>% of Current vs Max.......</td>
<td>6.25 % of Current vs Max........</td>
</tr>
<tr>
<td>Free Space................</td>
<td>65208 Free QCBs................</td>
</tr>
<tr>
<td>% of Freespace............</td>
<td>99.50 % of Freespace...........</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>------ INTERNAL POOL ------</th>
<th>------ INTERNAL QCBs ------</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Pool Size.........</td>
<td>1584 Current QCBs Allocated...</td>
</tr>
<tr>
<td>Free Space................</td>
<td>1584 Free QCBs................</td>
</tr>
<tr>
<td>% of Freespace............</td>
<td>100.00 % of Freespace...........</td>
</tr>
</tbody>
</table>

---

**PI ENQUEUE SUMMARY**

<table>
<thead>
<tr>
<th>Regions in PI Wait</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regions Holding Locks</td>
<td>4</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Pool Size</td>
<td>PI Statistics Menu (IPIMS), where you can access information about waiting regions, ultimate holders, and resource contention</td>
</tr>
<tr>
<td>Regions in PI Wait</td>
<td>PI Region Lock Wait List view (IPIRGWT), which shows the regions that are waiting for a resource</td>
</tr>
</tbody>
</table>

---

**PI Statistics Menu (IPIMS)**

The PI Statistics Menu (IPIMS) provides access to detailed information about waiting regions, ultimate holders, and resource contention.
You can hyperlink to the IPIMS menu from the **Current Pool Size** field in the IPISTAT view.

**Figure 145: PI Statistics Menu (IPIMS)**

<table>
<thead>
<tr>
<th>Timeframe - Realtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI Activity</td>
</tr>
<tr>
<td>Regions in PI Wait</td>
</tr>
<tr>
<td>Resource Contention</td>
</tr>
<tr>
<td>Holding Regions</td>
</tr>
<tr>
<td>Database Contention</td>
</tr>
</tbody>
</table>

Place cursor on menu item and press ENTER. Return...
Analyze contention

Use the contention views to:

- Determine the source of latch contentions (see “Analyze N-Way data sharing resource contention” on page 239)
- Analyze and resolve N-way data sharing contentions (see “Analyze latch contention” on page 255)

Analyze N-Way data sharing resource contention

You use the IRLM lock views to analyze and resolve N-way data sharing resource contention.

You can use the views to answer the following questions:

- Is there a contention problem?
- How severe or widespread is it?
- Which resources are most contended for?
- How do I resolve the problem?

The degree of contention is indicated in fields that show the number of regions waiting, the longest wait times, and the average wait times.

The following IRLM lock views are provided:

- “IRLM Ultimate Holder List view (ILKULLST)” on page 242
- “IRLM Wait With Ultimate Holder view (ILKULTWT)” on page 243
- “IRLM Region Lock List view (ILKRGLST)” on page 244
Analyze lock problems

A good way to begin analyzing lock problems is by using the:

- IRLM Ultimate Holder List view (ILKULLST)
- IRLM Wait With Ultimate Holder view (ILKULTWT)

You can also look at the Wait Time field in the ILKRGWT view. The Wait Time field shows you the extent of any problems that may exist (for example, how long the waiters for a resource have been waiting).

To investigate a long wait time, you can hyperlink from the Wait Time field to access the IRLM Resource Lock List view (ILKRSLST), which shows who holds the resource that is being waited for and who else may be waiting for it.

The cause of a problem may be that the holder of the resource is also waiting for another resource. To see what the holder is waiting for, hyperlink from the holder’s Hold Time field in the ILKRSLST view. The hyperlink takes you to the ILKRGLST view, which provides a list of all locks held or waited for by that specific holder.

If you want to investigate further, hyperlink from the holder’s Wait Time field in the ILKRGLST view to see who holds the resource that the holder is waiting for. You can repeat this process until you find the original cause of the problem.

Tip

To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.
Access the IRLM lock views

You can access a filtered version of the IRLM lock views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS Operations Menu (EZIOPSR)
- IMS DBA Easy Menu (EZIDBA, EZIDBAR)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering IRLM on the COMMAND line and then selecting a view from the list of IRLM views.

For more specific information about hyperlinks to the PI lock views, see the sections that describe the views.

ILKSUMR view and ILKM menu primary command

The ILKSUMR view and the ILKM menu support the IMSCMDS primary command.

Primary commands are entered on the COMMAND line.

The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.

IRLM lock views line commands

The IRLM lock views help you determine the cause of lock contention problems.

The following line commands are available on IRLM lock views with a line command area:
<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| P            | Stop a region  
Issues the IMS /STOP REGION command to stop a region or regions.  
You can issue the P command on a line in the ILRGRGLST or ILKRSLST view to stop only the region listed on that line. |
| PA           | Stop a region with an ABDUMP  
Issues the IMS /STOP REGION ABDUMP command to abnormally terminate a region or regions with a dump.  
You can issue the PA command on a line in the ILKRGRLST or ILKRSLST view to create an ABDUMP for the region listed on that line. |
| U            | *(Valid on the ILKSUMR view only)* Update LOCKTIME options  
Use the U line command and overtype one or more of the following fields to dynamically update the LOCKTIME values:  
- MSG Time  
- MSG Option  
- BMP Time  
- BMP Option  
See the online Help for more information about the field meanings and values. |

**Note**

Line commands require implementation of the MainView AutoOPERATOR product for IMS.

---

**IRLM Ultimate Holder List view (ILKULLST)**

The IRLM Ultimate Holder List view (ILKULLST) provides a list of each ultimate holder which includes the holder jobname, status, region ID, PSB name, transaction name, and IMS ID.

You can hyperlink to the ILKULLST view from the:

- **Cnt Ult** field in the IRLM Wait With Ultimate Holder view (ILKULTWT)
- **Tot Lock** field in the Region/IMS Connect Activity view (IRGNICS)
- **Tot Lock** field in the Region Activity Summary view (IRGNSUMR)
- **Current Lock** field in the Region Activity Detail view (IRGNDTLR)
**Tot Lock** field in the Region/Thread Program view (IRGNPGMR)

**Figure 146: IRLM Ultimate Holder List view (ILKULLST)**

<table>
<thead>
<tr>
<th>Command</th>
<th>Scroll</th>
<th>CSR</th>
<th>Mainview Window Interface (V6.0.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN</td>
<td>1</td>
<td>ALT WIN</td>
<td>1</td>
</tr>
<tr>
<td>&gt;W1 =ILKULLST=(ALL=)(ALL=)I1JUN2010=11:56:22=MVIMS=U=20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Related Views**
- Regions in IRLM Wait
- Database Contention
- Resource Contention
- IRLM Statistics

**Related Links**
- Waiters ID
- Ultimate ID
- PSB Name

The following hyperlinks are provided in the ILKULLST view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiters ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types DRGNDTLR and IRGNDTLR show what processing the region or thread has done up until now.</td>
</tr>
<tr>
<td>Ultimate ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types DRGNDTLR and IRGNDTLR show what processing the region or thread has done up until now.</td>
</tr>
<tr>
<td>PSB Name</td>
<td>DL/I Call Status view (IDLIST), which provides details about the last DL/I call issued by the region</td>
</tr>
</tbody>
</table>

**IRLM Wait With Ultimate Holder view (ILKULTWT)**

The IRLM Wait With Ultimate Holder view (ILKULTWT) provides a list of the number of ultimate regions that hold a resource, the ultimate region name, and the IMS subsystem name.
You can hyperlink to the ILKULTWT view from the:

- **Locks** field in the IMS Dashboard Overview view (IMSDSHOR)
- **Locking** field in the IMS Dashboard view (IMSDASSR)

**Figure 147: IRLM Wait With Ultimate Holder view (ILKULTWT)**

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has done up until now.</td>
</tr>
<tr>
<td>PSB Name</td>
<td>DL/I Call Status view (IDLIST), which provides details about the last DL/I call issued by the region</td>
</tr>
<tr>
<td>Cnt Ult</td>
<td>IRLM Ultimate Holder List view (ILKULLST), which provides a list of ultimate holders</td>
</tr>
<tr>
<td>Database Name</td>
<td>IRLM Resource Wait List view (ILKRSWT), which shows the resources that regions are waiting to get locks for</td>
</tr>
</tbody>
</table>

**IRLM Region Lock List view (ILKRGLST)**

The IRLM Region Lock List view (ILKRGLST) provides a list of all locks held or waited for by all regions.

Locks held or waited for are displayed by region.

The ILKRGLST view shows:
Every resource lock:
— Held by any region
— Waited for by any region

How long the region has been:
— Waiting for the lock
— Holding the lock

You can hyperlink to the ILKRGLST view from the:

• Regions Holding option in the IMS System Menu (EZIMSS)
• Region Lock Detail option in the IRGNMR Region Menu
• Tot Lock field in the IRGNSUMR and IRGNPGMR region activity views
• Current Lock Detail field in the IRGNDTLR region activity view
• Status field in the Region Program Isolation Activity View (IRGNPILR)
• Holding Regions option in the IRLM Statistics Menu (ILKMS)
• Number Holders field in the ILKRSSUM view
• Hold Time field in the IRKLSTLST view

Figure 148: IRLM Region Lock List view (ILKRGLST)

The following hyperlinks are provided on the view:
### IRLM Region Lock Summary view (ILKRGSUM)

The IRLM Region Lock Summary view (ILKRGSUM) is a high-level view that displays a list of all regions that are waiting for or holding database locks.

Regions with the longest wait times are displayed first.

The view shows:

- Every region that
  - Holds a resource lock
  - Is waiting for a resource lock
- How long a region has been
  - Holding a lock
  - Waiting for a lock
- How many resource locks the region holds
- How long the longest currently held lock has been held

You can hyperlink to the ILKRGSUM view from the:

- Database Lock Waits option in the IMS Easy Menu (EZIMS) and the IMS SSI Easy Menu (EZISSI)

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has done up until now.</td>
</tr>
<tr>
<td>Rgn Jobname</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has done up until now.</td>
</tr>
<tr>
<td>Wait Time</td>
<td>IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource</td>
</tr>
<tr>
<td>Hold Time</td>
<td>IRLM Resource Lock List view (ILKRSLST), where you can see the waiters for a specific resource</td>
</tr>
</tbody>
</table>
DBCTL Operations Menu (EZDOPSR)
Long Lock Waits option in the DBCTL Menu (DBCMP)

**Figure 149: IRLM Region Lock Summary view (ILKRGSUM)**

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has completed up until now.</td>
</tr>
<tr>
<td>Rgn Jobname</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has completed up until now.</td>
</tr>
<tr>
<td>Wait Time</td>
<td>IRLM Resource Wait List view (ILKRSWT), which shows the resources that regions are waiting to get locks for.</td>
</tr>
<tr>
<td>Num Held</td>
<td>IRLM Resource Lock List view (ILKRSLST), which shows all waiters for and holders of a database resource.</td>
</tr>
</tbody>
</table>

**IRLM Region Lock Wait List view (ILKRGWT)**

The IRLM Region Lock Wait List view (ILKRGWT), provides a list of all regions that are waiting for database resource locks. Regions with the longest waits are shown at the top.

The view shows:

- Every resource lock waited for by any region
- How long any region has been waiting for any lock
The ILKRGWT view is a good starting place for analyzing lock problems. The view highlights problems and shows their extent. You can hyperlink from the view to determine the cause of a problem.

You can hyperlink to the ILKRGWT view from the:

- Regions Waiting option in the IMS System Menu (EZIMSS)
- Regions in Lock Wait option in the DBCTL Operations Menu (EZDOPSR) and the DBCTL DBA Easy Menu (EZIDBA)
- Locking Contention option in the DBCTL Dashboard Menu (DBCMDASH)
- **Locking** field in the DBCTL Dashboard Menu (DBCMDASH)
- Regions in IRLM Wait option in the IRLM Statistics Menu (ILKMS)
- **Number Waiters** field in the ILKRSSUM view

**Figure 150: IRLM Region Lock Wait List view (ILKRGWT)**

<table>
<thead>
<tr>
<th>Rgn IMS</th>
<th>Rgn Jobname</th>
<th>Rgn Typ</th>
<th>Status</th>
<th>Database DCB/Area RBA/Type</th>
<th>F</th>
<th>G</th>
<th>Cur Wait</th>
<th>IRLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>I12Y I12YBMP2 BMP WT-IRLM</td>
<td>CUSTHDAM</td>
<td>1</td>
<td>00001A6C</td>
<td>P</td>
<td>G</td>
<td>UPD</td>
<td>23.9 IR2G</td>
</tr>
<tr>
<td>2</td>
<td>I12Y IMSM12X MPP WT-IRLM</td>
<td>CUSTHDAM</td>
<td>1</td>
<td>00001A6C</td>
<td>P</td>
<td>G</td>
<td>UPD</td>
<td>21.1 IR2G</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rgn ID</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has completed up until now.</td>
</tr>
<tr>
<td>Rgn Jobname</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has completed up until now.</td>
</tr>
<tr>
<td>Wait Time</td>
<td>IRLM Resource Lock List view (ILKRSLLST), where you can see all waiters and holders of a given resource</td>
</tr>
</tbody>
</table>
IRLM Resource Lock List view (ILKRSLST)

The IRLM Resource Lock List view (ILKRSLST) shows all waiters for and holders of any database resource.

With the ILKRSLST view, you can see:

- Every resource lock held by any participant in an N-way data sharing group
- Every resource lock waited for by any participant
- How long a region has been waiting for a lock
- How long a region has been holding a lock

You can enter ILKRSLST on the COMMAND line to view a list of all resources contended for and their respective holders and waiters. If you are interested in a specific resource, you can hyperlink from the Wait Time field to see only waiters and holders for the specific resource.

You can hyperlink to the ILKRSLST view from the following views to see the waiters and holders for a selected resource only:

- **Wait Time** field in the ILKRGLST, ILKRGWT, and ILKRSWT views
- **Num Held** field in the ILKRGSUM view

**Figure 151: IRLM Resource Lock List view (ILKRSLST)**

![Table](image)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR), where you can access database I/O activity information at the level of the physical database</td>
</tr>
</tbody>
</table>
## IRLM Resource Lock Summary view (ILKRSSUM)

The IRLM Resource Lock Summary view (ILKRSSUM) shows which database resources are most contended for.

Degree of contention for a given resource is measured by number of regions waiting (**Number Waiters** field), longest wait times (**Oldest Waiter** field), and average wait times (**Avg Wait** field).

The ILKRSSUM view shows:

- Every resource held by any participant in an N-way data sharing group
- Every resource waited for by any participant
- The number of waiters
- The number of holders

You can also see the:

- Longest wait time
- Average wait time
- Longest hold time

You can hyperlink to the ILKRSSUM view from the Database Contention option in the following menus:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait Time</td>
<td>Another version of the IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders for a given resource</td>
</tr>
<tr>
<td>Hold Time</td>
<td>IRLM Region Lock List view (ILKRGLST), where you can see all the resources held or waited for by a selected region. This information is especially helpful for analyzing lock problems where a region holding requested resources is itself waiting for another resource.</td>
</tr>
<tr>
<td>Rgn Jobname</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types. DRGNDTLR and IRGNDTLR show what processing the region or thread has completed up until now.</td>
</tr>
</tbody>
</table>
- IMS System Menu (EZIMSS)
- DBCTL DBA Easy Menu (EZIDBA)
- IRLM Statistics Menu (ILKMS)

**Figure 152: IRLM Resource Lock Summary view (ILKRSSUM)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Command</th>
<th>Scroll</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>26MAR2009</td>
<td>16:24:50</td>
<td>MAINVIEW WINDOW INTERFACE (V6.0.00)</td>
<td>MVIMS</td>
<td>D</td>
</tr>
</tbody>
</table>

**Related Views**
- Regions in IRLM Wait
- Holding Regions
- Resource Contention
- IRLM Statistics

<table>
<thead>
<tr>
<th>Database Name</th>
<th>DCB/Area</th>
<th>RBA/Type</th>
<th>F</th>
<th>G</th>
<th>Highest State</th>
<th>Number Waiters</th>
<th>Waiter Wait</th>
<th>Holders</th>
<th>Holder</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTHDAM</td>
<td>1</td>
<td>00000D38</td>
<td>P</td>
<td>G</td>
<td>H-UPD</td>
<td>1</td>
<td>0.2</td>
<td>0.2</td>
<td>1</td>
</tr>
<tr>
<td>CUSTHDAM</td>
<td>1</td>
<td>000006A6</td>
<td>P</td>
<td>G</td>
<td>H-UPD</td>
<td>1</td>
<td>0.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR), where you can access database I/O activity information at the level of the physical database</td>
</tr>
<tr>
<td>Number Waiters</td>
<td>IRLM Region Lock Wait List view (ILKRGWT), which lists all regions that are waiting for database resource locks</td>
</tr>
<tr>
<td>Number Holders</td>
<td>IRLM Region Lock List view (ILKRGLST), which lists all locks held or waited for by all regions</td>
</tr>
</tbody>
</table>

**IRLM Resource Lock Wait List view (ILKRSWT)**

The IRLM Resource Lock Wait List view (ILKRSWT) provides a complete list of resources against which regions are waiting to get locks.

With the ILKRSWT view you can see:

- Every resource lock waited for by any participant in an N-way data sharing group
- How long any region has been waiting

Use the ILKRSWT view to list of all resources that have regions waiting for them. If you are interested in a specific resource, you can hyperlink from the **Wait Time** field to see only the waiters and holders for that resource.

You can hyperlink to the ILKRSWT view from the:
- **Wait Time** field in the ILKRGSUM view or the Resource Contention option in the IMS System Menu (EZIMSS) to see the waiters and holders for a selected resource only

- Resource Contention option in the IRLM Statistics Menu (ILKMS)

- **Database Name** field in the IRLM Wait With Ultimate Holder view (ILKULTWT)

**Figure 153: IRLM Resource Lock Wait List view (ILKRSWT)**

26MAR2009 16:28:46 ------ MAINVIEW WINDOW INTERFACE (V6.0.00) ------

**COMMAND ==>**

**SCROLL ==>**

**PAGE**

CURR WIN ==> 1        ALT WIN ==>

>M1 =ILKRSWT===========I10X=====*========26MAR2009==16:28:46====MVIMS=====D====0

- IRLM Resource Lock Wait List
- Related Views
  - Regions in IRLM Wait
  - Holding Regions
  - Database Contention
  - IRLM Statistics

**Database DCB/Area RBA/Type F G Cur Wait Rgn IMS Rgn Rgn Rgn MVS**

<table>
<thead>
<tr>
<th>Name</th>
<th>--------</th>
<th>--------</th>
<th>- - Sta</th>
<th>Time ID</th>
<th>ID</th>
<th>Jobname</th>
<th>Typ</th>
<th>Status</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTHDAM</td>
<td>1</td>
<td>00000038</td>
<td>P</td>
<td>G</td>
<td>UPD</td>
<td>4.3</td>
<td>5</td>
<td>X19H</td>
<td>IM81BMP1</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR), where you can access database I/O activity information at the level of the physical database</td>
</tr>
<tr>
<td>Wait Time</td>
<td>IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders for the selected resource</td>
</tr>
<tr>
<td>Rgn Jobname</td>
<td>Region/Thread Activity Detail view (DRGNDTLR) for DBT or ODB region types or Region Activity Detail view (IRGNDTLR) for all other region types DRGNDTLR and IRGNDTLR show what processing the region or thread has completed up until now.</td>
</tr>
</tbody>
</table>

**IRLM Statistics view (ILKSTAT)**

The IRLM Statistics view (ILKSTAT) provides detailed information about a specific IRLM.

The view shows the IRLM lock request counts, IRLM contention counts, IRLM structure statistics and statuses, data sharing XES statistics, and IRLM storage utilization and exit calls.

You can hyperlink to the ILKSTAT view from the:

- IRLM Statistics option in the IMS System Menu (EZIMSS)
- **IRLM** field (in the working set size section) in the DBCTL Dashboard Menu (DBCMDASH)

- **Subsystem ID** field in the IRLM Subsystems view (ILKSUMR)

---

**Figure 154: IRLM Statistics view (ILKSTAT)**

The following hyperlinks are provided in the ILKSTAT view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS ID</td>
<td>IRLM Statistics Menu (ILKMS), which provides access to detailed information about waiting regions, holding regions, and resource contention</td>
</tr>
<tr>
<td>IRLM SSID</td>
<td>IRLM Subsystems view (ILKSUMR), which shows all the IMS subsystems that participate in the IRLM data sharing group</td>
</tr>
<tr>
<td>IMS Jobname</td>
<td>IMS Dataset Allocation view (IMSDSNR), which displays data set names and their attributes for the control region, DLISAS, DBRC, IRLM, and PAS. You can issue the IMSDSNR command with one of the following parameters to display different data sets: CTL, DLIS, DBRC, IRLM, PAS, or jobname.</td>
</tr>
<tr>
<td>Region Waits</td>
<td>IRLM Region Lock Wait List view (ILKRGWT), which shows any resource locks the region is waiting for and how long the region has been waiting for locks</td>
</tr>
</tbody>
</table>
IRLM Subsystems view (ILKSUMR)

The IRLM Subsystems view (ILKSUMR) shows all the IMS subsystems that participate in the IRLM data sharing group.

The view also shows the state, intent, and status of each IMS subsystem.

You can hyperlink to the ILKSUMR view from the **IRLM SSID** field in the IRLM Statistics view (ILKSTAT).

---

IRLM Statistics Menu (ILKMS)

The IRLM Statistics Menu (ILKMS) provides access to detailed information about waiting regions, holding regions, and resource contention.

You can hyperlink to the menu from the:

- **IMS ID** field in the IRLM Statistics view (ILKSTAT)
- **State** field in the IRLM Subsystems view (ILKSUMR)

---

Figure 155: IRLM Subsystem view (ILKSUMR)

```
15SEP2011 13:55:27 ------ MAINVIEW WINDOW INTERFACE (V6.0.00) ---------------
COMMAND ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>M1 =ILKSUMR===========I12J46CT=*========15SEP2011==13:55:27====MVIMS====D====0
  IRLM Subsystems
  Related Views
  . Regions in IRLM Wait . Holding Regions
  . Resource Contention . Database Contention
C IMS  State      Subsystem  Statuses         MSG  MSG    BMP  BMP    Dead IRLM
- ID   ---------- Intent     ---------------- Time Option Time Option Lock Name
I12Z ACTV-=PRIM SHR-UPD    NORM              100 ABEND  N/A  STATUS    5 IR22
```

No hyperlinks are available on the view.

Figure 156: IRLM Statistics Menu (ILKMS)

```
15APR2007 10:50:27 ------ MAINVIEW WINDOW INTERFACE (Vx.x.xx) ---------------
COMMAND ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKMS=============IMSxxx===*========15APR2007==10:50:27====MVIMS====D====1
  IRLM Statistics Menu
  Timeframe - Realtime
  . Regions in IRLM Wait    |   Place cursor on    |  > IMS Easy Menu
  . Resource Contention     |    menu item and     |  > IMS Fast Menu
  . Holding Regions         |     press ENTER      |  > IMS Classic Menu
  . Database Contention     +----------------------  . Return...
```
Analyze latch contention

IMS uses latches to serialize task access to resources that prevent loss of control at critical times.

Use the latch views to determine the source of latch contention. You can use the views to answer the following questions:

- Is there a contention problem?
- How severe or widespread is it?
- Which regions have latch contentions?

The degree of contention is indicated in fields that show the number of regions waiting and the average wait time.

The following latch views are provided:

- “Latch Summary view (ILATCH)” on page 255
- “Latch Detail view (ILATCHD)” on page 256

Tip
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Latch Summary view (ILATCH)

The Latch Summary view (ILATCH) shows the source of any latch contention.

The view shows statistics for the latches that are listed. The latches can be used by multiple regions.

The regions waiting for the latches are shown by their identification number in the Rgn fields if more than one region is waiting for a latch.
At the top of the view are links to related views that can help solve latch contention.

**Figure 157: Latch Summary view (ILATCH)**

<table>
<thead>
<tr>
<th>Latch Name</th>
<th>ID</th>
<th>Cnt</th>
<th>ST</th>
<th>Rgn Stat</th>
<th>PSB Name</th>
<th>Rgn1</th>
<th>Rgn2</th>
<th>Rgn3</th>
<th>Rgn4</th>
<th>Totl Cnts</th>
<th>Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHED SUBQ</td>
<td>N/A</td>
<td>--</td>
<td>---</td>
<td>-----</td>
<td>GENERIC</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SCHEDULE</td>
<td>SCHD</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SMB HASH</td>
<td>BLKM</td>
<td>N/A</td>
<td>--</td>
<td>-----</td>
<td>GENERIC</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>STATISTICS</td>
<td>ACTL</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>STG MGR</td>
<td>SMGT</td>
<td>N/A</td>
<td>--</td>
<td>-----</td>
<td>GENERIC</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TCT BLOCK</td>
<td>TCTB</td>
<td>N/A</td>
<td>--</td>
<td>-----</td>
<td>GENERIC</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TERMINAL</td>
<td>TERM</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>USER</td>
<td>USER</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Latch Detail view (ILATCHD)**

The Latch Detail view (ILATCHD) shows detailed information about a latch.

To access the view, hyperlink to it from the Latch Name field on the Latch Summary view (ILATCH).

**Figure 158: Latch Detail view (ILATCHD)**

<table>
<thead>
<tr>
<th>Latch ID</th>
<th>CNTS</th>
<th>CBTS POOL</th>
<th>Cumulative Wait</th>
<th>2 Current Wait</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.
Manage Fast Path DEDB areas

Use the Fast Path DEDB area views to manage and control IMS data entry database (DEDB) areas.

Fast Path DEDB area management overview

With the Fast Path area views, you can access important information about each of the DEDB areas so that you can:

- Understand the impact of changing the status of a particular area
- Manage the programs and transactions that are sensitive to a DEDB area

The Fast Path DEDB area views display:

- DEDB area structure and status
- Amount of space available
- EQE information
- Extensive CI statistics, broken down by category

The following Fast Path DEDB area views are provided:

- “Fast Path DEDB Area Overview view (IFPSUMR)” on page 260
- “Fast Path DEDB Area Detail view (IFPDTLR)” on page 261
- “Fast Path DEDB Area Organization view (IFPORGR)” on page 262
- “Fast Path DEDB Area Status view (IFPSTAR)” on page 263
- “Fast Path DEDB Area Menu (IFPMR)” on page 264
Tip
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Access the Fast Path DEDB area views

You can access a filtered version of the Fast Path DEDB area lock views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS Resource Menu (EZIMSRS)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering FPAREAS on the COMMAND line and then selecting a view from the list of Fast Path DEDB area views.

For more specific information about hyperlinks to the Fast Path DEDB area views, see the sections that describe the views.

Fast Path DEDB area views commands

The Fast Path DEDB area views offer primary and line commands.

Primary command

The Fast Path DEDB area views and menus support the IMSCMDS primary command.

Primary commands are entered on the COMMAND line.
The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.

## Line commands

The following line commands are available on the Fast Path DEDB area views with a line command area.

**Note**

Line commands require implementation of the MainView AutoOPERATOR product for IMS.

The global versions of the commands add the Global keyword to the corresponding IMS command.

IRLM must be in use for global database command support.

<table>
<thead>
<tr>
<th>Linecommand</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Stop an area</td>
</tr>
<tr>
<td>PG</td>
<td>Issues the IMS /STOP AREA command to stop an area. All of the area's data sets are closed.</td>
</tr>
<tr>
<td></td>
<td>■ P stops the area on the target IMS subsystem.</td>
</tr>
<tr>
<td></td>
<td>■ PG stops the area on all of the IMS subsystems sharing the database.</td>
</tr>
<tr>
<td>S</td>
<td>Start an area</td>
</tr>
<tr>
<td>SG</td>
<td>Issues the IMS /START AREA command to start an area.</td>
</tr>
<tr>
<td></td>
<td>■ S starts the area on the target IMS subsystem.</td>
</tr>
<tr>
<td></td>
<td>■ SG starts the area on all of the IMS subsystems sharing the database.</td>
</tr>
<tr>
<td>R</td>
<td>DBR an area</td>
</tr>
<tr>
<td>RG</td>
<td>Issues the IMS /DBRECOVERY AREA command to close, deallocate, and unauthorize an area.</td>
</tr>
<tr>
<td></td>
<td>■ R modifies the area on the target IMS subsystem.</td>
</tr>
<tr>
<td></td>
<td>■ RG modifies the area on all of the IMS subsystems sharing the database.</td>
</tr>
<tr>
<td>Linecommand</td>
<td>Result</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| N          | DBR an area with NOFEOV  
Issues the IMS /DBRECOVERY AREA NOFEOV command to close, deallocate, and unauthorize an area without forcing an OLDS switch  
- N modifies the area on the target IMS subsystem.  
- NG modifies the area on all of the IMS subsystems sharing the database. |
| SQ         | Quiesce a database  
This command issues the IMS UPD DB NAME() START(QUIESCE) OPTION(NO HOLD) command, which quiesces the selected database without placing a hold on the database. |
| SQH        | Quiesce a database  
This command issues the IMS UPD DB NAME() START(QUIESCE) OPTION(HOLD) command, which quiesces the selected database and places a hold on the database. |
| PQ         | Stop a database quiesce  
This command issues the IMS UPD DB NAME() STOP(QUIESCE) command, which stops the quiesce that is in progress for the selected database. |

**Fast Path DEDB Area Overview view (IFPSUMR)**

You can use the Fast Path DEDB Area Overview view to manage and control IMS DEDB areas.

You can hyperlink to the IFPSUMR view from the:

- Area option in the IMS Easy Menu (EZIMS) and IMS SSI Easy Menu (EZISSI)
- **Areas Initialized, Gen’ed, and Stopped** fields in the IMS Resource Menu (EZIMSRS)
- **Stopped Areas** field in the IMS Unavailable Resources view (IMSUNRSR)
- Filtering options in the IFPMR menu
Area Count field in the IFPSTAR view

Figure 159: Fast Path DEDB Area Overview view (IFPSUMR)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Name</td>
<td>Fast Path DEDB Area Menu (IFPMR), where you can access additional information about the selected Fast Path DEDB area</td>
</tr>
<tr>
<td>DBD Name</td>
<td>Database Detail view (IDBDTLR), which provides detailed statistics about a selected IMS database</td>
</tr>
<tr>
<td>Status 1</td>
<td>Region Activity Summary view (IRGNSUMR), which provides region information about the selected transaction</td>
</tr>
</tbody>
</table>

Fast Path DEDB Area Detail view (IFPDTLR)

You can use the Fast Path DEDB Area Detail view (IFPDTLR) to analyze a specific IMS DEDB area.

The IFPDTLR view shows the following control interval information:

- Size of VSAM control intervals (CIs)
- Number of root segment CIs
- Number of independent overflow (IOVF) CIs defined
- Number and percent of independent overflow (IOVF) CIs available
- Number of sequential dependent space (SDEP) CIs defined
- Number and percent of sequential dependent space (SDEP) CIs available
- Number of root segment and overflow CIs per unit of work
You can hyperlink to the IFPDTLR view from the Detail option in the IFPMR menu.

**Figure 160: Fast Path DEDB Area Detail view (IFPDTLR)**

<table>
<thead>
<tr>
<th>Command</th>
<th>Scroll</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28JAN2010 18:01:08</td>
<td>MainView WINDOW INTERFACE (V6.0.00)</td>
<td></td>
</tr>
<tr>
<td>Curr Win</td>
<td>Alt Win</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W1 =IFPDTLR=II1YIMSG=28JAN2010=18:01:08=MVIMS=1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Area Name**: DFSIVD3A
- **DBD Name**: IVPDB3
- **Area number**: 1
- **Status 1**: OPENED
- **IMS ID**: II1Y
- **Status 2**: 
- **IMS Job Name**: II1YIMSG
- **Status 3**: 
- **Init error code**: N/A
- **Organization**: VSAM
- **Type**: DEDB
- **Auth State**: UPDT-SGL
- **Access level**: UPDT
- **CI Size**: 512
- **RAA CIs**: 500
- **Root CIs per UOW**: 15
- **RAPS in Area**: 375
- **Local DMB#**: 351
- **Global DMB#**: 6
- **EEQE Count**: 0
- **NonRecoverable**: N
- **Full Segment Logging**: N
- **IOVF CIs**: 99
- **IOVF CIs Available**: 99
- **IOVF CIs % Available**: 100
- **DOVF CIs per UOW**: 5
- **DOVF CIs**: N/A
- **SDEP CIs % Available**: N/A
- **SDEP Logical begin**: N/A
- **SDEP Logical end**: N/A
- **Cycle count**: N/A
- **Number of datasets**: 2
- **First dataset**: IMS.V111Y.DFSIVD31
- **Second dataset**: IMS.V111Y.DFSIVD33

No hyperlinks are available on the view.

**Fast Path DEDB Area Organization view (IFPORGR)**

You can use the Fast Path DEDB Area Organization view (IFPORGR) to examine structure and space availability information for multiple DEDB areas.

For each area, the IFPDTLR view shows the following control interval information:

- Size of VSAM control intervals (CIs)
- Number of root segment CIs
- Number of independent overflow (IOVF) CIs defined
- Number of independent overflow (IOVF) CIs available
- Percent of independent overflow (IOVF) CIs available
- Number of sequential dependent space (SDEP) CIs defined
- Number of sequential dependent space (SDEP) CIs available
- Percent of sequential dependent space (SDEP) CIs available
- Number of root segment CIs per unit of work
- Number of overflow CIs per unit of work

You can hyperlink to the IFPORGR view from the Organization option in the IMS Resource Menu (EZIMSRS) and from the Areas Organization option in the IFPMR menu.

**Figure 161: Fast Path DEDB Area Organization view (IFPORGR)**

<table>
<thead>
<tr>
<th>CM Area</th>
<th>C/I Root</th>
<th>IOVF</th>
<th>SDEP</th>
<th>R-CI</th>
<th>O-CI</th>
<th>DBD</th>
<th>IMS</th>
<th>MVS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSDB</td>
<td>Size C/Igs</td>
<td>Aval %Av</td>
<td>C/Igs Aval %Av</td>
<td>/UOW /UOW Name</td>
<td>ID</td>
<td>ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFS1VD3A</td>
<td>IVPDB3</td>
<td>110X SJSC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFS1VD3B</td>
<td>IVPDB3</td>
<td>110X SJSC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDGDB</td>
<td>DBFSAMD5</td>
<td>110X SJSC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Name</td>
<td>Fast Path DEDB Area Menu (IFPMR), where you can access additional information about the selected Fast Path DEDB area</td>
</tr>
</tbody>
</table>

**Fast Path DEDB Area Status view (IFPSTAR)**

You can use the Fast Path DEDB Area Status view (IFPSTAR) to examine or modify the status of Fast Path DEDB areas.

The IFPSTAR view summarizes status information for all DEDB areas in the IMS by Level 1 and Level 2 status. Level 1 status indicates whether an area is open, not open, stopped, or locked. Level 2 status indicates error or failure conditions for the area. The view provides a count of all areas with the same status.
You can hyperlink to the IFPSTAR view from the Areas by Status option in the IMS Fast Menu (EZIFAST) and from the Summarized by Status option in the IFPMR menu.

**Figure 162: Fast Path DEDB Area Status view (IFPSTAR)**

26MAR2009 11:57:06 ------ MainView WINDOW INTERFACE (V6.0.00) ---------------
COMMAND ===> SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
W1 =IFPSTAR===========I10X=====*========26MAR2009==11:57:06====MVIMS====D====1
- Fast Path DEDB Areas Status
  Related Views
  . Areas Overview . Buffer Statistics
  . Areas Organization . Issue IMS Commands
CM Area    IMS IMS
-- Status 1 Status 2 Status 3  Count ID   Name
NOT-OPEN                        4 I10X I10XIMS

The following hyperlink is provided in the IFPSTAR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Count</td>
<td>IFPSUMR view, which provides additional information about the selected areas</td>
</tr>
</tbody>
</table>

**Fast Path DEDB Area Menu (IFPMR)**

The Fast Path DEDB Area Menu (IFPMR) provides quick access to Fast Path DEDB area information.

You can use the IFPMR menu to:

- Hyperlink to Fast Path area detail, organization, and status views
- Filter Fast Path area information on EQE count, read or write error, and locked or stopped status
- Hyperlink to the IMS Easy Menu (EZIMS) or IMS Fast Menu (EZIFAST)
You can hyperlink to the IFPMR menu from the **Area Name** field in the IFPSUMR and IFPORGR views.

**Figure 163: Fast Path DEDB Area Menu (IFPMR)**

<table>
<thead>
<tr>
<th>Timeframe - Realtime</th>
<th>FP Area Name -&gt; CUSA010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Related View</strong></td>
<td><strong>Filtering</strong></td>
</tr>
<tr>
<td><strong>Area Detail</strong></td>
<td><strong>EQE &gt; 0</strong></td>
</tr>
<tr>
<td><strong>Areas Organization</strong></td>
<td><strong>Read Error</strong></td>
</tr>
<tr>
<td><strong>Categories</strong></td>
<td><strong>Locked</strong></td>
</tr>
<tr>
<td><strong>Summarized by Status</strong></td>
<td><strong>Stopped</strong></td>
</tr>
</tbody>
</table>

Fast Path DEDB Area Menu

15APR2007 14:12:09 ----- MainView WINDOW INTERFACE (Vx.x.xx) -----------
COMMAND ==>> SCROLL ==>> PAGE
CURR WIN ==>> 1 ALT WIN ==>>
W1 =IFPMR=============IMSxxx===*========15APR2007==14:12:09====MVIMS=====D====1
  Fast Path DEDB Area Menu
  Timeframe - Realtime
  FP Area Name -> CUSA010
  IMS ID -> X17H
  IMS Name -> IMSxxx
  Related View Filtering
  Area Detail EQE > 0 IMS Easy Menu
  Areas Organization Read Error IMS Fast Menu
  Categories Write Error Issue IMS Commands
  Summarized by Status Stopped Return...
Manage databases

Use the database views to immediately access important information about each of your IMS databases, information that will help you better manage the databases and the programs and transactions that are sensitive to them.

Database management overview

With the database views, you can:

- Access detailed database information
- Summarize information by database access type or status
- Filter on EEQE (extended error queue element) count, read or write error, locked or stopped status
- Hyperlink to associated area and program information

The views show database access and organization type, authorization state, access level, local and global DMB numbers, current status, and whether the database is defined as nonrecoverable.

The following database views are provided:

- “Database Overview view (IDBSUMR)” on page 272
- “Database Detail view (IDBDTLR)” on page 274
- “Database Type Summary view (IDBTYPR)” on page 274
- “Database Status Summary view (IDBSTAR)” on page 275
- “Summarized Database Overview view (IDBSUMZ)” on page 276
- “Databases with Exceptions view (IDBEXCP)” on page 277
- “Database Menu (IDBMR)” on page 279
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Access the database views

You can access a filtered version of the database views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS Resource Menu (EZIMSRS)
- DBCTL Operations Menu (EZDOPSR)
- DBCTL DBA Easy Menu (EZIDBA)
- IMS Information Menu (IMSMINFO)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering DATABASE on the COMMAND line and then selecting a view from the list of database views.

For more specific information about hyperlinks to the database views, see the sections that describe the views.

Database views commands

The database views offer primary and line commands.

Primary command

The database views and menus support the IMSCMDS primary command.
Primary commands are entered on the COMMAND line.

The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.

## Line commands

In database views with a line command area, you can use the following line commands.

---

**Note**

Line commands require implementation of the MainView AutoOPERATOR product for IMS.

The global versions of the commands add the Global keyword to the corresponding IMS command.

IRLM must be in use for global database command support.

<table>
<thead>
<tr>
<th>Line commands</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Stop a database</td>
</tr>
<tr>
<td>PDG</td>
<td>This command issues the IMS /STOP DATABASE command to stop a database. Instead of closing the database, the STOP command prevents subsequently scheduled programs from accessing the database. Programs that were already scheduled are not affected.</td>
</tr>
<tr>
<td>PDG</td>
<td>P and PD stop the database on the target IMS subsystem.</td>
</tr>
<tr>
<td>NPA</td>
<td>PG and PDG stop the database on all IMS subsystems sharing the database.</td>
</tr>
<tr>
<td></td>
<td>NPA stops database access without unloading the randomizer. This feature prevents a reload of the randomizer into ECSA storage for subsequent START commands, thus preventing ECSA fragmentation.</td>
</tr>
<tr>
<td>S</td>
<td>Start a database</td>
</tr>
<tr>
<td>SDSG</td>
<td>This command issues the IMS /START DATABASE command to start a database. The START command allocates and permits access to the database. Any messages on the suspend queue, for transactions whose programs have access to the database, are moved to the normal queue.</td>
</tr>
<tr>
<td>SDG</td>
<td><strong>Note:</strong> If the database is registered to DBRC and requires backout or recovery, the database will not be started.</td>
</tr>
<tr>
<td>SDA</td>
<td>S and SD start the database on the target IMS subsystem.</td>
</tr>
<tr>
<td></td>
<td>SG and SDG start the database on all IMS subsystems sharing the database.</td>
</tr>
<tr>
<td></td>
<td>SDA starts a DEDB database and all associated areas.</td>
</tr>
<tr>
<td>Line commands</td>
<td>Result</td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>R</strong></td>
<td>Recover a database with DBR</td>
</tr>
<tr>
<td><strong>RDRG</strong></td>
<td>This command issues the IMS /DBR DATABASE command. DBR closes and deallocates the database and unauthorizes it with DBRC. The command is used to prevent programs or transactions from accessing the database. After closing the database, IMS switches to the next OLDS and issues a simple checkpoint. The /DBD DATABASE will fail for any databases being accessed by a BMP or JBP.</td>
</tr>
<tr>
<td><strong>RDG</strong></td>
<td>R and RD modify the database on the target IMS subsystem.</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>NDNG</td>
</tr>
<tr>
<td><strong>NDG</strong></td>
<td>This command issues the IMS /DBR DATABASE command with the NOFEOV option. The NOFEOV prevents IMS from performing an OLDS switch after completing the database recovery.</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>Lock a database</td>
</tr>
<tr>
<td><strong>LD</strong></td>
<td>This command issues the IMS /LOCK DATABASE command to lock a database. The LOCK command prevents subsequently scheduled programs from accessing the database. Programs already scheduled are not affected.</td>
</tr>
<tr>
<td><strong>U</strong></td>
<td>Unlock a database</td>
</tr>
<tr>
<td><strong>UD</strong></td>
<td>This command issues the IMS /UNLOCK DATABASE command to unlock a database. The UNLOCK command allows programs and transactions to access the database.</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>DDDG</td>
</tr>
<tr>
<td><strong>DDG</strong></td>
<td>This command issues the IMS /DBDUMP DATABASE, which prevents transactions or programs from updating DL/I databases. Message regions that use the database finish processing and terminate, after which the database closes and then reopens for input. <strong>Note:</strong> The dump command fails if any BMPs or JBP's are accessing the database.</td>
</tr>
<tr>
<td><strong>QRY</strong></td>
<td>Query a database</td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td>This command issues the IMS QUERY DB NAME() SHOW(ALL) command and displays the IMS output from the command. This command is a Type-2 command, which requires an IMSplex environment.</td>
</tr>
<tr>
<td><strong>Line commands</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| QXP              | Query whether an export to the IMS repository is needed for a resource. This command issues the IMS type-2 command QUERY type NAME (name) SHOW(EXPORTNEEDED) and displays the results. **Note:**  
  ■ This query is valid on the ITRxxxR, IDBxxxR, and IPGxxxR views only.  
  ■ The line command is supported for IMS version 14 and later. |
| SQ               | Quiesce a database. This command issues the IMS UPD DB NAME() START(QUIESCE) OPTION(NOHOLD) command, which quiesces the selected database without placing a hold on the database. |
| SQH              | Quiesce a database. This command issues the IMS UPD DB NAME() START(QUIESCE) OPTION(HOLD) command, which quiesces the selected database and places a hold on the database. |
| PQ               | Stop a database quiesce. This command issues the IMS UPD DB NAME() STOP(QUIESCE) command, which stops the quiesce that is in progress for the selected database. |
| ARO              | Change the access level for a database to Read-Only on this IMS only (ACCESS=RO). The selected database becomes available for read-only processing; only programs that have a PCB processing option of GO (PROCOPT=GO) can use this database. **Note:**  
  ■ The ARO command is valid on the IDBDTLR, IDBEXCP, IDBSUMR, and IDBSUMZ views only.  
  ■ The command takes the database offline to make the change. |
| ARD              | Change access level for a database to Read on this IMS only (ACCESS=RD). The selected database becomes available for read-only processing. Programs with update intent are scheduled, but they cannot update the database. **Note:**  
  ■ The ARD command is valid on the IDBDTLR, IDBEXCP, IDBSUMR, and IDBSUMZ views only.  
  ■ The command takes the database offline to make the change. |
<table>
<thead>
<tr>
<th>Line commands</th>
<th>Result</th>
</tr>
</thead>
</table>
| AUP | Change access level for a database to Update on this IMS only  
The selected database is available for read and update processing.  
**Note:**  
- The AUP command is valid on the IDBDTLR, IDBEXCP, IDBSUMR, and IDBSUMZ views only.  
- The command takes the database offline to make the change. |
| AEX | Change access level for a database to Exclusive  
The selected database is used exclusively by this IMS subsystem.  
**Note:**  
- The AEX command is valid on the IDBDTLR, IDBEXCP, IDBSUMR, and IDBSUMZ views only.  
- The command takes the database offline to make the change.  
- The database must be registered to DBRC. |

### Database Overview view (IDBSUMR)

You can use the Database Overview view (IDBSUMR) to manage and control IMS databases.

The IDBSUMR view displays a scrollable list of all databases in the IMS subsystems and provides database-level statistics for each of the databases.

You can hyperlink to the IDBSUMR view from the:

- Databases option in the IMS Easy Menu (EZIMS) and the IMS SSI Easy Menu (EZISSI)
- Databases Initialized, Gen’ed, and Stopped options in the IMS Resource Menu (EZIMSRS)
- All Databases option in the IMS DBA Easy Menu (EZIDBA)
- Filtering options in the IDBMR menu
- **Number of DB** field in the IDBSTAR view
- **Count** field in the IDBTYPR view
- **Status 1, Status 2, Auth State, and Acc Lvl** fields in the IDBEXCP and IDBSUMZ views

- **Physical DBNAME** field in several of the database activity views (IDA*)

- **Database** field in the cross-reference views (IX*) that include databases

**Figure 164: Database Overview view (IDBSUMR)**

<table>
<thead>
<tr>
<th>24SEP2015 04:04:31</th>
<th>MAINVIEW WINDOW INTERFACE (V6.1.00)</th>
<th>CURR WIN</th>
<th>ALT WIN</th>
<th>&gt;M1 =IDBSUMR=---------------------I14E52CT=*----------------24SEP2015==04:04:31==MVIMS==D==397</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Related Views</strong></td>
<td></td>
<td></td>
<td><strong>Database Overview</strong></td>
</tr>
<tr>
<td></td>
<td>- Summary by Status</td>
<td></td>
<td></td>
<td><strong>Database I/O Delays</strong></td>
</tr>
<tr>
<td></td>
<td>- Summary by Type</td>
<td></td>
<td></td>
<td><strong>Database Exceptions</strong></td>
</tr>
<tr>
<td><strong>CMD</strong></td>
<td><strong>DBD/PART</strong></td>
<td><strong>IMS</strong></td>
<td><strong>Database</strong></td>
<td><strong>Org</strong></td>
</tr>
<tr>
<td>BBFDDB01</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB02</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB03</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB04</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB05</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB06</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB07</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB08</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB09</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB10</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
<tr>
<td>BBFDDB11</td>
<td>I10X</td>
<td>Database</td>
<td>NOT-OPEN</td>
<td>NOT-INIT</td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBD/PARTName</td>
<td>Database Menu (IDBMR), where you can access more information about the database you selected</td>
</tr>
<tr>
<td>Status 1</td>
<td>Database Overview view (IDBSUMR) that is filtered to show all databases with the same status as the selected status</td>
</tr>
<tr>
<td>Status 2</td>
<td>Database Overview view (IDBSUMR), which shows all the databases with the status you selected</td>
</tr>
<tr>
<td>Status 3</td>
<td>Database Overview view (IDBSUMR), which shows all databases with the same status as the selected status</td>
</tr>
<tr>
<td>OSAM Exts</td>
<td>Database Data Sets Summary view (IDDSUMR), which displays OSAM, VSAM, and DEDB data set information</td>
</tr>
<tr>
<td>VSAM Exts</td>
<td>Database Data Sets Summary view (IDDSUMR), which displays OSAM, VSAM, and DEDB data set information</td>
</tr>
<tr>
<td>Auth State</td>
<td>Database Overview view (IDBSUMR) that is filtered to show all databases with the same authorization state as the selected authorization state</td>
</tr>
<tr>
<td>Acc Lvl</td>
<td>Database Overview view (IDBSUMR) that is filtered to show all databases with the same access level as the selected access level</td>
</tr>
</tbody>
</table>
Database Detail view (IDBDTLR)

The Database Detail view (IDBDTLR) provides detailed statistics about a selected IMS database.

You can hyperlink to the IDBDTLR view from the Detail option in the IDBMR menu.

**Figure 165: Database Detail view (IDBDTLR)**

![Database Detail view (IDBDTLR)](image)

No hyperlinks are available on the view.

---

Database Type Summary view (IDBTYPR)

You can use the Database Type Summary view (IDBTYPR) to examine database-access-type information in a tabular format.

The IDBTYPR view summarizes databases by type of DBD access method and by IMS ID, and it provides a count of the DBDs in each access method category.

No value in the **Type** field indicates that the associated database:

- Has been generated
- Does not have a member in ACBLIB
- Has a Status 2 of NOT-INIT

The IDBTYPR view specifies the organization type, associated IMS subsystem, and several levels of information about current status:
The **Status 1** field indicates whether a database is open, not open, stopped, or locked.

The **Status 2** field indicates error or failure conditions for the database.

The **Status 3** field provides error or warning indications, and provides additional detail if a NOT-INIT status is shown in the **Status 2** field.

You can hyperlink to the IDBTYPR view from the Databases Summarized by Type option in the IMS Resource Menu (EZIMSRS) and from the Type option in the IDBMR menu.

### Figure 166: Database Type Summary view (IDBTYPR)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>View Details</th>
<th>Related Views</th>
<th>CMD</th>
</tr>
</thead>
<tbody>
<tr>
<td>24SEP2015</td>
<td>04:55:32</td>
<td>MAINVIEW WINDOW INTERFACE (V6.1.00)</td>
<td>Database Overview, Data Base I/O Delays, Database Exceptions, Summary by Status, Data Set I/O Delays, Database Xref Summary</td>
<td>IMS</td>
</tr>
<tr>
<td>M1 =IDBTYPR</td>
<td></td>
<td></td>
<td></td>
<td>IMS</td>
</tr>
<tr>
<td>389 NOT-OPEN</td>
<td>I10XIMS</td>
<td>I10X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSDB</td>
<td>OPENED</td>
<td>I10XIMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHIDAM</td>
<td>STOPPED</td>
<td>I10XIMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSINDEX</td>
<td>STOPPED</td>
<td>I10XIMS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlink is available on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>Database Overview (IDBSUMR), which displays a scrollable list of all databases in the IMS subsystems and provides database-level statistics for each of the databases.</td>
</tr>
</tbody>
</table>

## Database Status Summary view (IDBSTAR)

You can use the Database Status Summary view (IDBSTAR) to examine database status information in a tabular format.

The IDBSTAR view summarizes all databases in the IMS subsystems by status and by IMS ID. It also provides a count of the databases in each status category. Summarization is by Status 1. (Status 1 indicates whether a database is open, not open, stopped, or locked. Status 2 indicates error or failure conditions for the database.)

You can hyperlink to the IDBSTAR view from the:

- Databases by Status option in the IMS Fast Menu (EZIFAST)
- Databases Summarized by Status option in the IMS Resource Menu (EZIMSR)
- Databases by Status option in the IMS DBA Easy Menu (EZIDBA)
- Full Function Databases option in the IMS Information Menu (IMSINFOR)
- Status option in the IDBMR menu

Figure 167: Database Status Summary view (IDBSTAR)

<table>
<thead>
<tr>
<th>24SEP2015 05:11:44</th>
<th>---- MAINVIEW WINDOW INTERFACE (V6.1.00) ---------</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
</tr>
<tr>
<td>M1 =IDBSTAR=============I14E52CT=*========24SEP2015==05:11:44==MVIMS==D====4</td>
<td></td>
</tr>
</tbody>
</table>

- Database Status Summary
  - Related Views
    - Database Overview
    - Database I/O Delays
    - Database Exceptions
    - Summary by Type
    - Data Set I/O Delays
    - Database Xref Summary

<table>
<thead>
<tr>
<th>CMD</th>
<th>Number IMS</th>
<th>IMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>--- Status 1 Status 2 Status 3 of DB ID Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT-OPEN</td>
<td>234 I10X I10XIMS</td>
<td></td>
</tr>
<tr>
<td>NOT-OPEN NOT-INIT NODMB</td>
<td>158 I10X I10XIMS</td>
<td></td>
</tr>
<tr>
<td>OPENED</td>
<td>3 I10X I10XIMS</td>
<td></td>
</tr>
<tr>
<td>STOPPED</td>
<td>2 I10X I10XIMS</td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status 1</td>
<td>Database Overview view (IDBSUMR), which shows all databases with the status you selected</td>
</tr>
<tr>
<td>Number of DB</td>
<td>Database Overview view (IDBSUMR), which shows all databases with the status you selected</td>
</tr>
</tbody>
</table>

Summarized Database Overview view (IDBSUMZ)

The Summarized Database Overview view (IDBSUMZ) displays a scrollable list of all databases in the IMS subsystems and provides database-level statistics for each of the databases.

You can use the IDBSUMZ view to manage and control IMS databases that are defined on a single IMS subsystem or on multiple IMS subsystems.

A database that is present in multiple IMS subsystems is displayed in one row of the view, and the information about the database is aggregated. Commands that are issued against the database are issued in all the IMS subsystems.
You can hyperlink to the IDBSUMZ view from the Databases option in IMS Operations Menu (EZIOPSR).

**Figure 168: Summarized Database Overview view (IDBSUMZ)**

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBD/PARTName</td>
<td>Database Menu (IDBMR), where you can access more information about the database you selected</td>
</tr>
<tr>
<td>Status 1</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the same status as the selected status</td>
</tr>
<tr>
<td>Status 2</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the same status as the selected status</td>
</tr>
<tr>
<td>Auth State</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the same authorization state as the selected authorization state</td>
</tr>
<tr>
<td>Acc Lvl</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the same access level as the selected access level</td>
</tr>
</tbody>
</table>

**Databases with Exceptions view (IDBEXCP)**

The Databases with Exceptions view (IDBEXCP) shows operational IMS databases that have an exception status.

You can use the IDBEXCP view to manage and control the operational databases by issuing commands and seeing immediate results. For a database to be operational, the following criteria must be met:

- The database must be defined in the IMS gen.
- A DBDGEN must be run.
- The database must be added to the DBDLIB.
- A database DD must be added to the IMS control region (with the DFSMDA macro for dynamic allocation).
- The DBD/ACB entry must be available in the active ACBLIB.

You can hyperlink to the IDBEXCP view from the:

- Databases option (under Resource Exceptions) in the DBCTL Operations Menu (EZDOPSР)
- Databases in Exception option in the DBCTL DBA Easy Menu (EZIDBA)
- **Stopped DBs** field in the IMS Unavailable Resources view (IMSUNRSR)

**Figure 169: Database with Exceptions view (IDBEXCP)**

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBD/PARTName</td>
<td>Database Menu (IDBMR), where you can access more information about the database you selected</td>
</tr>
<tr>
<td>Status 1</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the selected status</td>
</tr>
<tr>
<td>Status 2</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the selected status</td>
</tr>
<tr>
<td>Status 3</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the selected status</td>
</tr>
<tr>
<td>Auth State</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the selected authorization state</td>
</tr>
<tr>
<td>Acc Lvl</td>
<td>Database Overview view (IDBSUMR), filtered to show all databases with the selected access level</td>
</tr>
</tbody>
</table>
Database Menu (IDBMR)

You can use the Database Menu to quickly access information about a specific database in an IMS subsystem.

You can hyperlink to the IDBMR menu from the **DBD/PART Name** field in the IDBSUMR and IDBEXCP views.

**Figure 170: Database Menu (IDBMR)**

<table>
<thead>
<tr>
<th>15APR2007 13:55:04</th>
<th>MainView WINDOW INTERFACE (Vx.x.xx)</th>
<th>COMMAND ===&gt;</th>
<th>SCROLL ===&gt;</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
<td>W1 =IDBMR==</td>
<td>IMSxxx==</td>
<td>15APR2007==13:54:59==MVIMS==D==1</td>
</tr>
</tbody>
</table>

- **Database Menu**
  - Timeframe - Realtime
  - **Database Name** -> DBUFSAMD3
  - **IMS ID** -> H81H
  - **IMS Name** -> IMSxxx
  - Related Resources
    - Detail
    - Associated areas
    - Associated Program
    - Associated Trans
    - Categories
    - Type
    - Status
  - Filtering
    - EEQE > 0
    - Read Error
    - Write Error
    - Locked
    - Stopped
  - Tools and Menus
    - IMS Easy Menu
    - IMS Fast Menu
    - Issue IMS Commands
    - Return...
Manage application programs

The program views determine:

- How well application programs are running
- What the impact will be if you change the status of a particular program

Application program management overview

The program views show the transactions and databases associated with each program, and they show the status of each transaction and database.

You can use the status information to assess the impact of changing a program’s status.

The program views display:

- All programs (with counts) of any given type or status
- Transactions affected if you change a program’s status
- Regions currently running a program
- Programs in exception status

The following program views are provided:

- “Program Overview view (IPGSUMR)” on page 284
- “Program Count by Type view (IPGTYPR)” on page 285
- “Program Count by Type and Status view (IPGSTAR)” on page 285
- “Summarized Program Overview view (IPGSUMZ)” on page 286
- “Programs with Exceptions view (IPGEXCP)” on page 287
Tip
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

Access the program views

You can access a filtered version of the program views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS Resource Menu (EZIMSRS)
- IMS Operations Menu (EZIOPSR)
  DBCTL Operations Menu (EZDOPSR)
- DBCTL DBA Easy Menu (EZIDBA)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering PROGRAM on the COMMAND line and then selecting a view from the list of program views.

For more specific information about hyperlinks to the database views, see the sections that describe the views.

Program views commands

The program views offer primary and line commands.
Primary command

The program views and menus support the IMSCMDS primary command.

Primary commands are entered on the COMMAND line.

The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.

Line commands

You can use the following line commands on the program views.

Note

Line commands require implementation of the MainView AutoOPERATOR product for IMS.

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| PPP          | Stop a program  
This command issues the IMS /STOP PROGRAM command to stop a program. |
| SSP          | Start a program  
This command issues the IMS /START PROGRAM command to start a program. |
| LLP          | Lock a program  
This command issues the IMS /LOCK PROGRAM command to lock a program. |
| UUP          | Unlock a program  
This command issues the IMS /UNLOCK PROGRAM command to unlock a program. |
| QRY          | Query a program  
This command issues the IMS QUERY PGM NAME() SHOW(ALL) command. The IMS output from this command is displayed. |
| QXP          | Query whether an export to the IMS repository is needed for a resource  
This command issues the IMS type-2 command QUERY type NAME (name) SHOW(EXPORTNEEDED) and displays the results.  
Note:  
- This query is valid valid on the ITRxxxR, IDBxxxR, and IPGxxxR views only.  
- The line command is supported for IMS version 14 and later. |
Program Overview view (IPGSUMR)

The Program Overview view is a high-level view that lists all IMS application programs by name and identifies their program type, status, and scheduling type.

For more information, view the Quick Course "MainView for IMS - Transaction, Program, & DB Status".

You can hyperlink to the IPGSUMR view from the:

- Programs option in the IMS Easy Menu (EZIMS) and the IMS SSI Easy Menu (EZISSI)
- Programs Initialized, Gen’ed, and Stopped options in the IMS Resource Menu (EZIMSRS)
- Selection/Filtering options in the IPGMR menu
- Program Name field in the cross-reference views (IX*) that include programs

Figure 171: Program Overview view (IPGSUMR)

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Program Menu (IPGMR), where you can get quick access to views for examining and managing the selected program</td>
</tr>
</tbody>
</table>
Program Count by Type view (IPGTYPR)

The Program Count by Type view (IPGTYPR) provides a quick way to look at all programs of a specific type.

This view summarizes all IMS application programs by type and identifies the count of all programs in each type.

You can hyperlink to the IPGTYPR view from the Programs Summarized by Type option in the IMS Resource Menu (EZIMSRS) and from the Summarization by Type option in the IPGMR menu.

Figure 172: Program Count by Type view (IPGTYPR)

No hyperlinks are available on the view.

Program Count by Type and Status view (IPGSTAR)

The Program Count by Type and Status view (IPGSTAR) summarizes all IMS application programs by type and status and shows the count of all programs having both the same type and status.
You can hyperlink to the IPGSTAR view from the Programs by Status option in the IMS Fast Menu (EZIFAST) and from the Programs Summarized by Status option in the IMS Resource Menu (EZIMSRS).

**Figure 173: Program Count by Type and Status view (IPGSTAR)**

<table>
<thead>
<tr>
<th>Command</th>
<th>IMS</th>
<th>IMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>---</strong></td>
<td><strong>Status</strong></td>
<td><strong>Type</strong></td>
</tr>
<tr>
<td>Not initialized</td>
<td>BMP</td>
<td>41</td>
</tr>
<tr>
<td>Not initialized</td>
<td>BMP</td>
<td>41</td>
</tr>
<tr>
<td>Not initialized</td>
<td>TP</td>
<td>32</td>
</tr>
<tr>
<td>Not initialized</td>
<td>FP N</td>
<td>10</td>
</tr>
<tr>
<td>Not initialized</td>
<td>FP N</td>
<td>10</td>
</tr>
<tr>
<td>Not initialized</td>
<td>TP</td>
<td>32</td>
</tr>
<tr>
<td>Started</td>
<td>FP N</td>
<td>4</td>
</tr>
<tr>
<td>Started</td>
<td>TP</td>
<td>49</td>
</tr>
<tr>
<td>Started</td>
<td>FP U</td>
<td>1</td>
</tr>
<tr>
<td>Started</td>
<td>FP U</td>
<td>1</td>
</tr>
<tr>
<td>Started</td>
<td>BMP</td>
<td>47</td>
</tr>
<tr>
<td>Started</td>
<td>FP N</td>
<td>4</td>
</tr>
<tr>
<td>Started</td>
<td>BMP</td>
<td>47</td>
</tr>
<tr>
<td>Started</td>
<td>TP</td>
<td>49</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Summarized Program Overview view (IPGSUMZ)**

The Summarized Program Overview view (IPGSUMZ) lists all IMS application programs by name and identifies their type, status, and scheduling type.

You can use the IPGSUMZ view to manage and control IMS programs that are defined on a single IMS subsystem or on multiple IMS subsystems. A program that is present in multiple IMS subsystems is displayed in one row of the view, and the information about the program is aggregated. Commands that are issued against the program are issued in all the IMS subsystems.
You can hyperlink to the IPGSUMZ view from the Programs option in the DBCTL Operations Menu (EZDOPSR).

Figure 174: Summarized Program Overview view (IPGSUMZ)

<table>
<thead>
<tr>
<th>CMD</th>
<th>Program</th>
<th>IMS</th>
<th>Type</th>
<th>Status</th>
<th>MVS</th>
<th>Sched</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALIPSBF1</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>APPC01</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>APPC02</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>APPC03</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>APPC04</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>APPC05</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>APPC06</td>
<td>X91H</td>
<td>TP</td>
<td>Started</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAIPSBF1</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF2</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF3</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF4</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF5</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF6</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF7</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF8</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF9</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF10</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF11</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF12</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF13</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF14</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
<tr>
<td></td>
<td>BAPSBF15</td>
<td>X91H</td>
<td>BMP</td>
<td>Not initialized</td>
<td>SJSC</td>
<td>Parallel</td>
</tr>
</tbody>
</table>

The following hyperlink is provided in the IPGSUMZ view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Program Overview view (IPGSUMR), filtered on all programs of the same type</td>
</tr>
</tbody>
</table>

Programs with Exceptions view (IPGEXCP)

The Programs with Exceptions view (IPGEXCP) lists by program name the operational IMS programs that have an exception status.

For a program to be operational, the following criteria must be met:

- The program must be defined in the IMS gen.
- The PSB must be defined and have the same name as the program.
- A PSBGEN must be run.
- An ACBGEN must be run (for the PSB/ACB entry, which is run after the DBD/ACB entry has been created).
- The PSB/ACB entry must be available in the active ACBLIB.

You can hyperlink to the IPGEXCP view from the...
- Program option (under Resource Exceptions) in the IMS Operations Menu (EZIOPSR)

- **Stopped DBs** field in the IMS Unavailable Resources view (IMSUNRSR)

**Figure 175: Programs with Exceptions view (IPGEXCP)**

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SCROLL</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curr Win</td>
<td>Alt Win</td>
<td>M1 =IPGEXCP==I10X==27MAR2009==08:07:52==MVIMS==0==0</td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Program Menu (IPGMR), where you can get quick access to views for examining and managing the selected program</td>
</tr>
</tbody>
</table>

**Program Menu (IPGMR)**

The Program Menu (IPGMR) is a good starting place for examining how application programs are running.

You can hyperlink from the menu to access statistics for managing the programs in your IMS subsystems. The IPGMR menu has options that hyperlink to views showing:

- Program information filtered by type
- Program information filtered by started status or not started status
- Program summarization by type
- Program summarization by type and status
- Transactions affected if you change a program’s status
- Regions currently running a specific program
You can hyperlink to the IPGMR menu from the **Program Name** field in the EMH Message Processing view (IBGSUMR) and from the **Program Name** field in the IPGSUMR and IPGEXCP views.

**Figure 176: Program Menu (IPGMR)**

```
27MAR2009  08:08:51 ------ MainView WINDOW INTERFACE (V6.0.00)  ------
COMMAND ===>  SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>  
W1 =IPGMR=--------------------------10X=**********27MAR2009=08:08:51===MVIMS====D====1 
Program Menu 
Timeframe - Realtime

Program Name -> ALLPSBF1
IMS ID -> I10X 
MVS Name -> SJSC 

Related Resources +---------------------- System Wide Analysis
. Program Details | Place cursor on | Program/Tran 
| Regions running | menu item and | Region/Program 
| Associated databases | press ENTER | 
| Associated Trans | 

Selection/Filtering Summarization Tools and Menus 
. TP Only | By Type and Status > IMS Easy Menu 
. BMP Only | By Type > IMS Fast Menu 
. FP N Only | Issue IMS Commands 
. Started Programs | Return... 
. Not started Programs 
```
Cross-reference IMS resources

You can use the cross-reference views to discover the association between databases and programs. For example, if a database is unavailable, you can easily discover the cause. The problem may be with the database or with a program that uses the database.

Cross-referencing IMS resources overview

Using a preferred point of entry (database or program), you can conveniently cross-reference resources to:

- Investigate issues such as data unavailability
- Assess the impact of actions against IMS resources
- Issue actions against a database or a program

With cross-reference views, you can manage programs as they relate to a database, and you can manage the database itself. Before stopping a program or taking a database offline, you can use the cross-reference views to see all:

- Programs affected by a specific database
- Databases used by a program

The cross-reference views are designed so that you can pick a preferred point of entry. If you want to view information from a database perspective, choose an IXD* view (D for database); if you prefer a program perspective, choose an IXP* view. The following cross-reference views are provided:

- “All Records Cross-Reference view (IXRSUMR)” on page 298
- “Database Cross-Reference Summary view (IXDSUMR)” on page 300
- “Database-to-Program Cross-Reference view (IXDPSUMR)” on page 301
Access the cross-reference views

You can access a filtered version of the cross-reference views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- DBCTL DBA Easy Menu (EZIDBA)

An easy way to access the cross-reference views is from the IMS Cross-Reference Menu (EZIMSX), shown in “IMS Cross-Reference Menu (EZIMSX)” on page 307, where you can select the mode of cross-referencing you want to use.

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering XREF on the COMMAND line and then selecting a view from the list of cross-reference views. For more specific information about hyperlinks to the cross-reference views, see the sections that describe the views.

Cross-reference views commands

The cross-reference views provide an efficient tool for managing IMS resources. Use the views to determine the impact of actions you might take against databases, programs, or transactions.
Primary command

The cross-reference views and menus support the IMSCMDS primary command.

Primary commands are entered on the COMMAND line.

The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.

Line commands

The line commands you can use in cross-reference views depends on the resource types shown in the view.

For example, in a view that shows database names and program names, but not transaction codes, you can successfully issue database and program line commands but not transaction line commands.

The actions you can take in the cross-reference views are described with the individual views.

--- Note ---

Line commands require implementation of the MainView AutoOPERATOR product for IMS.

Database line commands

In cross-reference views that show database names, you can use the following line commands.

--- Note ---

The global versions of the commands add the Global keyword to the corresponding IMS command.

IRLM must be in use for global database command support.

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD</td>
<td>Stop a database</td>
</tr>
<tr>
<td>PDG</td>
<td>Issues the IMS /STOP DATABASE command to stop a database. The STOP command does not close the database. It prevents subsequently scheduled programs from accessing the database. Programs that were already scheduled are not affected. PD stops the database on the target IMS subsystem. PDG stops the database on all IMS subsystems that share the database.</td>
</tr>
<tr>
<td><strong>Line command</strong></td>
<td><strong>Result</strong></td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
</tr>
<tr>
<td>SD</td>
<td><strong>Start a database</strong>&lt;br&gt;Issues the IMS /START DATABASE command to start a database. The START command allocates and permits access to the database. Any messages on the suspend queue, for transactions whose program has access to the database, are moved to the normal queue. If the database is registered to DBRC and requires backout or recovery, it will not be started.&lt;br&gt;SD starts the database on the target IMS subsystem. SDG starts the database on all IMS subsystems that share the database.</td>
</tr>
<tr>
<td>SDG</td>
<td></td>
</tr>
<tr>
<td>RD</td>
<td><strong>DBRecover a database</strong>&lt;br&gt;Issues the IMS /DBR DATABASE command. DBR closes and deallocates the database and unauthorizes it with DBRC. The command is used to prevent programs or transactions from accessing the database. After closing the database, IMS switches to the next OLDS and issues a simple checkpoint. The /DBD DATABASE will fail for any databases being accessed by a BMP or JBP.&lt;br&gt;RD modifies the database on the target IMS subsystem. RDG modifies the database on all IMS subsystems that share the database.</td>
</tr>
<tr>
<td>RDG</td>
<td></td>
</tr>
<tr>
<td>ND</td>
<td><strong>DBRecover a database with the NOFEOV option</strong>&lt;br&gt;Issues the IMS /DBR DATABASE command with the NOFEOV option. The NOFEOV prevents IMS from doing an OLDS switch after completing the database recovery.&lt;br&gt;ND modifies the database on the target IMS subsystem. NDG modifies the database on all IMS subsystems that share the database.</td>
</tr>
<tr>
<td>NDG</td>
<td></td>
</tr>
<tr>
<td>LD</td>
<td><strong>Lock a database</strong>&lt;br&gt;Issues the IMS /LOCK DATABASE command to lock a database. The LOCK command prevents subsequently scheduled programs from accessing the database. Programs already scheduled are not affected.</td>
</tr>
<tr>
<td>UD</td>
<td><strong>Unlock a database</strong>&lt;br&gt;Issues the IMS /UNLOCK DATABASE command to unlock a database. The /UNLOCK command allows programs and transactions to access the database.</td>
</tr>
<tr>
<td>DD</td>
<td><strong>DBDUMP a database</strong>&lt;br&gt;Issues the IMS /DBDUMP DATABASE. These commands are used to prevent transactions or programs from updating DL/I databases. Message regions using the database will be terminated when they finish processing. The database will then be closed and reopened for input. The database dump command will fail if any BMPs or JBPs are accessing the database.&lt;br&gt;DD modifies the database on the target IMS subsystem. DDG modifies the database on all IMS subsystems that share the database.</td>
</tr>
<tr>
<td>DDG</td>
<td></td>
</tr>
<tr>
<td>SQ</td>
<td><strong>Quiesce a database</strong>&lt;br&gt;This command issues the IMS UPD DB NAME() START(QUIESCE) OPTION(NOHALD) command, which quiesces the selected database without placing a hold on the database.</td>
</tr>
<tr>
<td>SQH</td>
<td><strong>Quiesce a database</strong>&lt;br&gt;This command issues the IMS UPD DB NAME() START(QUIESCE) OPTION(HOLD) command, which quiesces the selected database and places a hold on the database.</td>
</tr>
</tbody>
</table>
Take a database offline

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| PQ           | Stop a database quiesce  
This command issues the IMS UPD DB NAME() STOP(QUIESCE) command, which stops the quiesce that is in progress for the selected database. |

Program line commands

In cross-reference views that show program names, you can use the following line commands:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
</table>
| PP           | Stop a program  
Issues the IMS /STOP PROGRAM command to stop a program. |
| SP           | Start a program  
Issues the IMS /START PROGRAM command to start a program. |
| LP           | Lock a program  
Issues the IMS /LOCK PROGRAM command to lock a program. |
| UP           | Unlock a program  
Issues the IMS /UNLOCK PROGRAM command to unlock a program. |

Take a database offline

If you have a database in error, you can use the IXDPSUMR view, IXDASUMR view, or the IXDTSUMR view (MainView for IMS only) to assess the impact of taking a database offline before you take any action.

First you can identify both the programs and the transactions (MainView for IMS only) that use the database. Then you can issue line commands to modify their state (if appropriate) before you take action against the database in error.

Solve a failure to take database offline

When you attempt to take a database offline, the most common reason for failure is that you have a BMP or JBP currently running against that database (DFS565I message), which causes the DBR command to fail.

With the cross-reference views, you can identify any BMP or JBP programs that are sensitive to that database and you can take actions against them. In the IXDPSUMR
view, you can issue a line command to change the state of the BMP or JBP program, and then you can issue a line command to take the database offline.

Solve a program failure at startup

When a program fails at startup due to unavailable resources (an abend U3303, for example), you can use the IXPDSUMR view to easily identify the unavailable resource and take action against the resource.

The IXPDSUMR view shows whether all needed databases are available and if not, the reason why. In the IXPDSUMR view, you can issue line commands to modify the state of databases, and then you can issue a line command to start the program in question.

For more information, view the Quick Course "MainView for IMS - Transaction, Program, & DB Status".

Control resource records

If your site has a large number of resources defined, unlimited processing of resource records for display in cross-reference views can have an unacceptable impact on your CPU and storage usage.

You can control how many records are processed for display and which records are displayed in the cross-reference views.

Limit the number of records processed

You can use the XREFLIM parameter in BBPARM member IMFBEX00 to control the number of resource records that are processed for display in the cross-reference views.

Setting an appropriate record limit with XREFLIM can prevent excessive CPU and storage usage.

The recommended XREFLIM value is 100000. The minimum value is 1000. There is no upper limit to the parameter value, but an overly large value might use excessive resources in the PAS. (If the parameter is omitted, no limit is imposed.)
When the XREFLIM processing limit is reached, processing stops before all possible records are displayed, and the following message is displayed:

**Cross-reference processing limit (nnn) reached**

To determine the current limit, use the IBEXSUMR view. To immediately reset the limit without performing a reset or restart, use the SETOPTS primary command on any view and specify a limit in the **Cross-reference limit** field.

For information about IMFBEX00, see the *MainView for IMS and MainView for DBCTL Customization Guide*.

---

**Filter displayed records**

You can use the **Filters** field in cross-reference views to control which records are displayed, within the limit imposed by the XREFLIM parameter.

The **XREFFLTR** parameter in BBPARM member IMFBEX00 controls whether filters are required or optional.

When filter usage is required, the first time you access one of the cross-reference views, the following message displays prompting you to specify a filter:

**BBFP7126I Filters enforced, specify a pattern for the cross-reference**

In the **Filters** field, you specify one or more values to filter the primary resource for the view. The primary resource is the first column on the view. You can specify exact names or qualified names using a trailing asterisk. Multiple values are separated by a space.

For example, on the IXDTSUMR view you want to display databases whose names start with BE or GB, or that are named DB1. You would type **BE* GB* DB1** in the **Filters** field.

Filter settings are maintained between instances of a view and from session to session for the same user. Filters are not retained between system IPLs.

To determine the current setting of the XREFFLTR parameter use the IBEXSUMR view. To immediately change the setting without performing a reset or restart, use the SETOPTS primary command on any view and change the value in the **Enforce Xref filters** field.

For information about IMFBEX00, see the *MainView for IMS and MainView for DBCTL Customization Guide*.
Control displayed records by using view command resource parameters

You can use resource parameters in cross-reference view commands to control which records are displayed, within the limit imposed by the XREFLIM parameter.

Table 14 on page 298 shows the parameters that you can use for each of the cross-reference views and the order in which they must be specified.

For example, if you enter the following command on a COMMAND line, the only resources the IXPSUMR view will display are programs that start with PG, followed by a single character, followed by MD and any number of characters, and transactions that start with TR. (An asterisk is the default value for omitted resource parameters.)

IXPSUMR PG?MD* TR* *

Table 14: Cross-reference view resource parameters

<table>
<thead>
<tr>
<th>View name</th>
<th>Parameters (in the order in which they must be specified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IXRSUMR</td>
<td>program, transaction, database</td>
</tr>
<tr>
<td>IXDSUMR</td>
<td>database, program, transaction</td>
</tr>
<tr>
<td>IXDPSUMR</td>
<td>database, IMSid, program</td>
</tr>
<tr>
<td>IXDTSUMR</td>
<td>database, IMSid, transaction</td>
</tr>
<tr>
<td>IXPSUMR</td>
<td>program, transaction, database</td>
</tr>
<tr>
<td>IXPDSUMR</td>
<td>program, IMSid, database</td>
</tr>
<tr>
<td>IXPDEXCP</td>
<td>program, IMSid, database</td>
</tr>
<tr>
<td>IXPTSUMR</td>
<td>program, IMSid, transaction</td>
</tr>
<tr>
<td>IXTSUMR</td>
<td>transaction, program, database</td>
</tr>
<tr>
<td>IXTPSUMR</td>
<td>transaction, IMSid, program</td>
</tr>
<tr>
<td>IXTDSUMR</td>
<td>transaction, IMSid, database</td>
</tr>
<tr>
<td>IXTDEXCP</td>
<td>transaction, IMSid, database</td>
</tr>
</tbody>
</table>

All Records Cross-Reference view (IXRSUMR)

You can use the All Records Cross-Reference view when you want to see a complete cross-reference of all programs, databases, and transactions (MainView for IMS Online only) in the IMS subsystem.
IXRSUMR is an unsummarized view that contains a line entry for each program, database, or transaction (MainView for IMS Online only) association. Each line entry is a separate record.

With the IXRSUMR view, you can:

- Assess the impact of any actions you might take against a program
- Issue line commands against programs, transactions, and databases

You can hyperlink to the IXRSUMR view from the:

- **Database** field in the IXDSUMR view
- **Program Name** field in the IXPSUMR view
- (MainView for IMS Online only) **Prog-> Tran-> Database** option in the IMS DBA Easy Menu (EZIDBA)
- (MainView for IMS Online only) **Tran Code** field in the IXDTSUMR and IXTSUMR views

**Figure 177: All Records Cross-Reference view (IXRSUMR)**

| 27AUG2013  11:19:33 ------ MAINVIEW WINDOW INTERFACE (V6.1.00) --------------- |
| COMMAND ====>                                                 SCROLL ===> CSR |
| CURR WIN ===> 1        ALT WIN ===> |
| W1 =IXRSUMR-------------I13HS1C7=*=*=********27AUG2013==11:19:33==MVIMS==D==816 |
| Related Views |
| . Pgm Xref Summary . Pgm to DB Xref . Pgm to DB Exceptions |
| . DB Xref Summary . DB to Active Pgm Xref . Tran to Pgm Xref |
| . Tran Xref Summary . Tran to DB Xref . Tran to DB Exceptions |
| . Issue IMS Commands |
| Filters: * |
| CMD Program Tran Database IMS Execute MVS IMS |
| --- Name Code ID IMS ID Name Name |
| APPC02 APPC02 unavail X19H X19H SYSC IMSxxx |
| DBFSAMP2 no tran DBFSAMD4 X19H X19H SYSC IMSxxx |
| DBFSAMP3 FPSAMP1 DBFSAMD1 X19H X19H SYSC IMSxxx |
| DBFSAMP3 FPSAMP1 DBFSAMD2 X19H X19H SYSC IMSxxx |
| DBFSAMP3 FPSAMP1 DBFSAMD3 X19H X19H SYSC IMSxxx |
| DBFSAMP3 FPSAMP1 DBFSAMD4 X19H X19H SYSC IMSxxx |
| DBFSAMP4 FPSAMP2 DBFSAMD1 X19H X19H SYSC IMSxxx |
| DBFSAMP4 FPSAMP2 DBFSAMD2 X19H X19H SYSC IMSxxx |
| DBFSAMP4 FPSAMP2 DBFSAMD3 X19H X19H SYSC IMSxxx |

Because all records are displayed in the IXRSUMR view, the view contains no summarization and no hyperlinks.
Database Cross-Reference Summary view (IXDSUMR)

You can use the Database Cross-Reference Summary view (IXDSUMR) to cross-reference databases with the programs and transactions (MainView for IMS Online only) that use them or are associated with them.

The IXDSUMR view lists all databases, and it shows all the programs and transactions (MainView for IMS Online only) that are sensitive to each database. You can use the IXDSUMR view to:

- Assess the impact of any actions you might take against a database
- Issue line commands against databases, programs, and transactions

You can hyperlink to the IXDSUMR view from both of the Tran and Program options (in the Database to section and the Database Selection section) in the IMS Cross-Reference Menu (EZIMSX).

The following hyperlink is provided in the IXDSUMR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>All Records Cross-Reference view (IXRSUMR), which provides a complete cross-reference of all programs and databases in the IMS subsystem</td>
</tr>
</tbody>
</table>
You can use the Database-to-Program Cross-Reference view (IXDPSUMR) to see useful database-to-program cross-reference information.

IXDPSUMR is a summary view that lists all databases and the programs that use them.

You can use the IXDPSUMR view to:

- Assess the impact of any actions you might take against a database
- See whether needed database and program resources are available before starting a program
- Issue line commands against databases and programs

The IXDPSUMR view is especially useful for assessing the impact of taking a database offline. The view provides extensive information about each program associated with a database.

You can hyperlink to the IXDPSUMR view from the:

- Program with Status options (in the Database to section and the Database Selection section) in the IMS Cross-Reference Menu (EZIMSX)
- Programs/Databases and Databases/Programs options in the IMS Easy Menu (EZIMS), the IMS Fast Menu (EZIFAST), and the IMS SSI Easy Menu (EZISSI)
- DB-> Program option in the DBCTL DBA Easy Menu (EZIDBA)
**Database-to-Active Program Cross-Reference view (IXDASUMR)**

The Database-to-Active Program Cross-Reference view (IXDASUMR) lists all databases with active programs that are currently using the databases. The associated transactions are also listed.

The IXDASUMR view is useful to determine which programs are currently using databases before taking a database offline.

The IXDPSUMR view is especially useful for assessing the impact of taking a database offline. The view provides information about each program associated with a database.
You can hyperlink to the IXDPSUMR view from the DB-> Active Program option in the DBCTL DBA Easy Menu (EZIDBA).

Figure 180: Database-to-Active Program Cross-Reference view (IXDASUMR)

<table>
<thead>
<tr>
<th>26AUG2013 15:21:50</th>
<th>------ MAINVIEW WINDOW INTERFACE (V6.1.00) -------</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND ===&gt;</td>
<td>SCROLL ===&gt; CSR</td>
</tr>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
</tr>
<tr>
<td>W1 =IXDASUMR====</td>
<td>Database/Active PSB XREF</td>
</tr>
<tr>
<td>Related Views</td>
<td>. DB to Tran Xref . Database Overview . All Records Summary</td>
</tr>
<tr>
<td>. DB to Pgm Xref</td>
<td>. Database Delays . Issue IMS Commands</td>
</tr>
<tr>
<td>Filters: *</td>
<td></td>
</tr>
<tr>
<td>CMD Database</td>
<td>Program Tran IMS Execute MVS IMS</td>
</tr>
<tr>
<td>---</td>
<td>Name Code ID Name Name</td>
</tr>
<tr>
<td>IVPDB1</td>
<td>DFSIVP1 IVTNO I13H I13H SJSD I13H51CT</td>
</tr>
<tr>
<td>IVPDB1I</td>
<td>DFSIVP1 IVTNO I13H I13H SJSD I13H51CT</td>
</tr>
<tr>
<td>IVPDB1II</td>
<td>DFSIVP1 IVTNO I13H I13H SJSD I13H51CT</td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Region Activity Summary view (IRGNSUMR), which provides region information about the selected transaction</td>
</tr>
</tbody>
</table>

Program Cross-Reference Summary view (IXPSUMR)

You can use the Program Cross-Reference Summary view (IXPSUMR) to cross-reference programs and their associated databases and transactions (MainView for IMS Online only).

The IXPSUMR view lists all databases and transactions (MainView for IMS Online only) associated with all programs. You can use the view to:

- Assess the impact of any actions you might take against a program
- Issue line commands against programs, transactions, and databases
You can hyperlink to the IXPSUMR view from both the Database and Tran options (in the Program to section and the Program Selection section) in the IMS Cross-Reference Menu (EZIMSX).

Figure 181: Program Cross-Reference Summary view (IXPSUMR)

The following hyperlink is provided in the IXPSUMR view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>All Records Cross-Reference view (IXRSUMR), where you can see a complete cross-reference of all programs and databases in the IMS subsystem</td>
</tr>
</tbody>
</table>

Program-to-Database Cross-Reference view (IXPDSUMR)

The Program-to-Database Cross-Reference view (IXPDSUMR) lists all programs, the databases they are sensitive to, and the status of the databases.

You can use the IXPDSUMR view to:

- Determine whether needed program and database resources are available before you start a program
- Issue line commands against programs and databases

If you want to check on resource availability for a particular program, you can hyperlink from the IXPDSUMR Database field to access a filtered version of the
Database Overview view (IDBSUMR), which shows the status of all databases the program is sensitive to.

For more information, view the Quick Course "MainView for IMS - Transaction, Program, & DB Status".

You can hyperlink to the IXPDSUMR view from the:

- Database with Status options (in the Program to section and the Program Selection section) in the IMS Cross-Reference Menu (EZIMSX)
- Programs/Databases option in the IMS Easy Menu (EZIMS), the IMS Fast Menu (EZIFAST), and the IMS SSI Easy Menu (EZISSI)
- Prog-> Database option in the DBCTL DBA Easy Menu (EZIDBA)
- Associated Databases option in the Program Menu (IPGMR)

Figure 182: Program-to-Database Cross-Reference view (IXPDSUMR)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Program Overview view (IPGSUMR), which provides additional information about the selected program</td>
</tr>
<tr>
<td>Database</td>
<td>Database Overview view (IDBSUMR), which provides additional information about the selected database</td>
</tr>
</tbody>
</table>
Program-to-Databases with Exceptions Cross-Reference view (IXPDEXCP)

The Program-to-Databases with Exceptions Cross-Reference view (IXPDEXCP) provides program-to-database cross-reference information for operational databases that have an exception status.

For a database to be operational, the following criteria must be met:

- The database must be defined in the IMS gen.
- A DBDGEN must be run.
- The database must be added to the DBDLIB.
- A database DD must be added to the IMS control region (with the DFSMDA macro for dynamic allocation).
- The DBD/ACB entry must be available in the active ACBLIB.

You can use the IXPDEXCP view to issue line commands against programs and databases.

You can hyperlink to the IXPDEXCP view from the **Prog-> DBs in Exception** field in the DBCTL DBA Easy Menu (EZIDBA).

**Figure 183:** Program-to-Databases with Exceptions Cross-Reference view (IXPDEXCP)

<table>
<thead>
<tr>
<th>CMD</th>
<th>Program</th>
<th>IMS</th>
<th>Program</th>
<th>Database</th>
<th>TYPE</th>
<th>ORG</th>
<th>STATUS</th>
<th>1</th>
<th>STATUS</th>
<th>2</th>
<th>AUTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>Name</td>
<td>ID</td>
<td>Status</td>
<td>----</td>
<td>------</td>
<td>-----</td>
<td>--------</td>
<td>--</td>
<td>--------</td>
<td>--</td>
<td>------</td>
</tr>
<tr>
<td>DDLTPSB</td>
<td>I9A</td>
<td>Started</td>
<td>DDLTDBD</td>
<td>HISM</td>
<td>VSAM</td>
<td>STOPPED</td>
<td>NOT-OPEN</td>
<td>NOT-AUTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DDLTPSBL</td>
<td>I9A</td>
<td>Started</td>
<td>DDLTDBD</td>
<td>HISM</td>
<td>VSAM</td>
<td>STOPPED</td>
<td>NOT-OPEN</td>
<td>NOT-AUTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPIH</td>
<td>I9A</td>
<td>Started</td>
<td>DB1H</td>
<td>PHID</td>
<td>OSAM</td>
<td>STOPPED</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPIH</td>
<td>I9A</td>
<td>Started</td>
<td>DB1HSX</td>
<td>PSI5</td>
<td>VSAM</td>
<td>STOPPED</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPIH</td>
<td>I9A</td>
<td>Started</td>
<td>DB1H</td>
<td>PHID</td>
<td>OSAM</td>
<td>STOPPED</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPIH</td>
<td>I9A</td>
<td>Started</td>
<td>DB1HSX</td>
<td>PSI5</td>
<td>VSAM</td>
<td>STOPPED</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MVIPSBB1</td>
<td>I9A</td>
<td>Started</td>
<td>DDLTDBD</td>
<td>HISM</td>
<td>VSAM</td>
<td>STOPPED</td>
<td>NOT-OPEN</td>
<td>NOT-AUTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE4CNINO</td>
<td>I9A</td>
<td>Started</td>
<td>BE2PCUST</td>
<td>HISM</td>
<td>VSAM</td>
<td>NOT-OPEN</td>
<td>ALLOC-F</td>
<td>NOT-REG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE4CODEL</td>
<td>I9A</td>
<td>Started</td>
<td>BE2PCUST</td>
<td>HISM</td>
<td>NOT-OPEN</td>
<td>ALLOC-F</td>
<td>NOT-REG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE4CODEL</td>
<td>I9A</td>
<td>Started</td>
<td>BE3ORDER</td>
<td>HIDM</td>
<td>VSAM</td>
<td>NOT-OPEN</td>
<td>ALLOC-F</td>
<td>NOT-REG</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following hyperlinks are provided in the IXPDEXCP view:
IMS Cross-Reference Menu (EZIMSX)

The IMS Cross-Reference Menu (EZIMSX) provides easy access to views that you can use to cross reference IMS resources.

The EZIMSX menu also provides direct access to other menus and utilities where you can change targets and timeframes.

You can hyperlink to the EZIMSX menu from the:

- Cross-Reference Menu option in the IMS Fast Menu (EZIFAST)
- Cross-Reference Menu option in the DBCTL Fast Menu (EZIFAST)
- Cross Reference option in the DBCTL Menu (DBCMP)

Figure 184: IMS Cross-Reference Menu (EZIMSX)

IMS Cross-Reference Menu

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Program Overview view (IPGSUMR), which provides additional information about the selected program</td>
</tr>
<tr>
<td>Database</td>
<td>Database Overview view (IDBSUMR), which provides additional information about the selected database</td>
</tr>
</tbody>
</table>

Note

Not all options are available to a DBCTL system.
Monitor ODBM address spaces and threads

Use the Open Database Manager (ODBM) views to monitor and administer ODBM address spaces and threads.

ODBM address spaces and threads monitoring overview

The ODBM summary and detail views provide a system-wide overview.

The views provide status and activity information for ODBM data stores, aliases, threads, SCI, and configuration members.

With the ODBM views, you can:

- Start and stop data store connections
- Start and stop alias connections
- Start and stop ODBM tracing
- Update configuration members
- Connect new data stores and aliases for an ODBM

Relevant ODBM related information is also displayed in other views of the MainView for IMS product, such as the regions and trace views. You may want to use the information collected in those views as part of your analysis.
The following ODBM views are provided:

- “ODBM Summary view (IODBSUMR)” on page 312
- “ODBM Data Store Summary view (IODBDSMR)” on page 312
- “ODBM Configuration Summary view (IODBCSMR)” on page 312
- “ODBM Alias Summary view (IODBASMR)” on page 313
- “ODBM Thread Summary view (IODBTSMR)” on page 314
- “ODBM SCI Summary view (IODBSSMR)” on page 314

**Tip**
To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.

### Access the ODBM views

You can access the ODBM views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and selecting the view from the VIEWS list, or by entering ODBM and selecting a view from the list of ODBM views.

### ODBM views line commands

The ODBM views offer line commands.
IODBSUMR view line commands

You can enter the following line commands on the IODBSUMR view:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDC</td>
<td>Start all data store connections for the selected ODBM</td>
</tr>
<tr>
<td>PDC</td>
<td>Stop all data store connections for the selected ODBM</td>
</tr>
<tr>
<td>SAC</td>
<td>Start all alias connections for the selected ODBM</td>
</tr>
<tr>
<td>PAC</td>
<td>Stop all alias connections for the selected ODBM</td>
</tr>
<tr>
<td>UC</td>
<td>Change which configuration member is being used for the selected ODBM</td>
</tr>
<tr>
<td>UCC</td>
<td>Change which configuration member is being used for the selected ODBM and connect to the new data stores and aliases specified in the configuration member</td>
</tr>
<tr>
<td>STR</td>
<td>Start ODBM tracing for all the data stores of the selected ODBM</td>
</tr>
<tr>
<td>PTR</td>
<td>Stop ODBM tracing for all the data stores of the selected ODBM</td>
</tr>
</tbody>
</table>

IODBDSMR view line commands

You can enter the following line commands on the IODBDSMR view:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDC</td>
<td>Start the connection of a data store to ODBM</td>
</tr>
<tr>
<td>PDC</td>
<td>Stop the connection of a data store to ODBM</td>
</tr>
<tr>
<td>STR</td>
<td>Start ODBM tracing for a data store</td>
</tr>
<tr>
<td>PTR</td>
<td>Stop ODBM tracing for a data store</td>
</tr>
</tbody>
</table>

IODBASMR view line commands

You can enter the following line commands on the IODBASMR view:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAC</td>
<td>Start the connection of an alias to ODBM</td>
</tr>
<tr>
<td>PAC</td>
<td>Stop the connection of an alias to ODBM</td>
</tr>
<tr>
<td>SDC</td>
<td>Start a data store connection for the selected ODBM</td>
</tr>
<tr>
<td>PDC</td>
<td>Stop a data store connection for the selected ODBM</td>
</tr>
</tbody>
</table>
ODBM Summary view (IODBSUMR)

The ODBM Summary (IODBSUMR) view is a good starting place for examining the status and activity of ODBM, data stores, aliases, threads, SCI, and configuration members.

The IODBSUMR view displays information about every ODBM that is running.

Figure 185: ODBM Summary view (IODBSUMR)

22SEP2009 14:59:55 ------ MainView WINDOW INTERFACE (V6.0.00) ---------------
COMMAND  ===> SCROLL ===> CSR
CURR WIN ===> 1 ALT WIN ===> 
>W1 =IODBSUMR ********************************22SEP2009=14:57:44===MVIMS===D===1

<table>
<thead>
<tr>
<th>CMD</th>
<th>ODBM</th>
<th>ODBM</th>
<th>Num DStr</th>
<th>Thrd</th>
<th>Alias</th>
<th>SCI</th>
<th>Name</th>
<th>Sys</th>
<th>IMSplex</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I11AOD</td>
<td>READY,ACTIVE</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>CSLDCA1A</td>
<td>SJSC</td>
<td>CSLPLX11</td>
<td>I11AOD</td>
</tr>
<tr>
<td></td>
<td>I11YOD</td>
<td>READY,ACTIVE</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>CSLDCY1A</td>
<td>SJSD</td>
<td>CSLPLX11</td>
<td>I11YOD</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

ODBM Data Store Summary view (IODBDMSMR)

The ODBM Data Store Summary (IODBDMSMR) view provides the status and activity for ODBM data stores.

You can hyperlink to the IODBDSMR view from the Num DStr field in the IODBSUMR view.

Figure 186: ODBM Data Store Summary view (IODBDMSMR)

22SEP2009 15:15:47 ------ MainView WINDOW INTERFACE (V6.0.00) ---------------
COMMAND  ===> SCROLL ===> CSR
CURR WIN ===> 1 ALT WIN ===> 
>W1 =IODBDMSMR ********************************22SEP2009=15:08:52===MVIMS===D===1

<table>
<thead>
<tr>
<th>CMD</th>
<th>DataStore</th>
<th>Name</th>
<th>Status</th>
<th>Thrd</th>
<th>Thrds</th>
<th>Alias</th>
<th>FPBU</th>
<th>FPBO</th>
<th>CNBA</th>
<th>IRTR</th>
<th>Timer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I11A</td>
<td>I11AOD</td>
<td>STARTED</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>20</td>
<td>99</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>I11Y</td>
<td>I11YOD</td>
<td>STARTED</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>20</td>
<td>99</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

ODBM Configuration Summary view (IODBCSMR)

The ODBM Configuration Summary (IODBCSMR) view displays the settings defined in the active ODBM configuration members.
You can hyperlink to the IODBCSMR view from the **Config Name** field in the IODBSUMR view.

**Figure 187: ODBM Configuration Summary view (IODBCSMR)**

<table>
<thead>
<tr>
<th>Config</th>
<th>DStr</th>
<th>Num</th>
<th>Alias</th>
<th>ODBM</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>GBL Name</td>
<td>Alias Names</td>
<td>ODBM</td>
<td>FPBU</td>
<td>FPBO</td>
</tr>
<tr>
<td>CSLDCA1A</td>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
<td>I11AOD</td>
<td>2</td>
</tr>
<tr>
<td>CSLDCA1A</td>
<td>N</td>
<td>I11A</td>
<td>1</td>
<td>DS1A</td>
<td>I11AOD</td>
</tr>
<tr>
<td>CSLDCY1A</td>
<td>Y</td>
<td>N/A</td>
<td>N/A</td>
<td>I11YOD</td>
<td>2</td>
</tr>
<tr>
<td>CSLDCY1A</td>
<td>N</td>
<td>I11Y</td>
<td>2</td>
<td>I11Y,I11G</td>
<td>I11YOD</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**ODBM Alias Summary view (IODBASMR)**

The ODBM Alias Summary (IODBASMR) view provides the status and activity for ODBM aliases. Aliases are the names that ODBM application clients use to connect to IMS data stores.

You can hyperlink to the IODBASMR view from the:

- **Num Alias** field in the IODBSUMR view
- **Num Alias** field in the IODBDSMR view
- **Alias** field in the IODBDSMR view

**Figure 188: ODBM Alias Summary view (IODBASMR)**

<table>
<thead>
<tr>
<th>Command</th>
<th>Num Thrd</th>
<th>ODBM Thread Summary (IODBTSMR) view, which displays thread status and activity for the data store</th>
</tr>
</thead>
</table>
ODBM Thread Summary view (IODBTSMR)

The ODBM Thread Summary (IODBTSMR) view provides the status and activity for ODBM threads.

You can hyperlink to the IODBTSMR view from the:

- **Num Thrd** field in the IODBSUMR view
- **Num Threads** field in the IODBSSMR view
- **Num Thrs** field in the IODBDSMR view
- **Num Thrd** field in the IODBASMR view

![Figure 189: ODBM Thread Summary view (IODBTSMR)]

22SEP2009 15:40:43 ------ MainView WINDOW INTERFACE (V6.0.00) ----------------
COMMAND ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
%M1 =IODBTSMR========I11A44CT=*========22SEP2009==15:40:04====MVIMS====D====0
-                          ODBM THREADS
DStore  User     Client   SCI      Active      Thread    PSB  Idle
Name    Id       ID       Name     Time        Status    Name   Time

No hyperlinks are available on the view.

ODBM SCI Summary view (IODBSSMR)

The ODBM SCI Summary (IODBSSMR) view provides the status and activity for SCI members that are connected to IMS data stores.

You can hyperlink to the IODBSSMR view from the **Num SCI** field in the IODBSUMR view.

![Figure 190: ODBM SCI Summary view (IODBSSMR)]

22SEP2009 15:38:24 ------ MainView WINDOW INTERFACE (V6.0.00) ----------------
COMMAND ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
%M1 =IODBSSMR=========I11A44CT=*========22SEP2009==15:35:47====MVIMS====D====0
-                       ODBM SCI MEMBERS
Sci  SCI  Num  ODBM  IMSplex  ODBM  ODBM
Name  Type  Threads Name  Name  Job  System

No hyperlinks are available on the view.
Manage IMS database activity

The IMS database activity views provide a useful tool for database analysis. The views make problem recognition in an N-way data sharing environment much easier.

IMS database activity management overview

Database administrators can use the database activity views to recognize and solve problems related to:

- I/O contention
- Buffer pool sizes and assignments
- Buffer cross-invalidation

While views like STRAC identify I/O at a transaction level, the database activity views provide a database perspective. The views serve as a system-wide resource, showing all:

- DL/I calls against a database (except for MSDB and GSAM databases)
- I/O activity for a database (except for MSDB and GSAM databases and I/O due to background write)

---

*Note*

DL/I calls and I/O activity are collected for DEDB databases if the Event Collector parameter DBFPLVL in BBPARM member IMFECP00 is set to collect DEDB statistics (the default). Database calls and I/O activity are collected for full function databases if the Event Collector parameter DBFFLVL in IMFECP00 is set to collect full function statistics (the default).

For information about IMFECP00, see the *MainView for IMS and MainView for DBCTL Customization Guide*. To determine the current setting of the parameters, use the IECPSUMR view.
You can use the database activity views to analyze I/O information related to logical and physical databases. Real-time, interval, and history statistics are provided. Counts, rate, and elapsed time are reported for both DL/I calls and database I/O events.

Information in the database activities views is summarized in the following categories so that you can solve database problems that occur at different levels.

- Data sharing group
- System
- Logical PCB (program control block)
- Physical database
- Volume
- Buffer pool

With the database activity views, you can examine DL/I call and I/O event information at the level of the problem that is occurring. You can pick the view that corresponds to the type of information you want and the level at which you want to see the information.

**Note**

Only examples of real-time versions of views are used.
If a view grouped by IMS is nearly identical to a view grouped by data sharing group, only the view grouped by IMS is described.
To learn more about a view that is not described in this chapter, access the view by typing its name on the COMMAND line. Then position the cursor on the view name (in the window information line) and press the Help key.

Table 15 on page 316 lists the views that group information by IMS.

**Table 15: Database activity views that group information by IMS system**

<table>
<thead>
<tr>
<th>View</th>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Activity for IMS Systems, real time</td>
<td>IDASSUMR</td>
<td>“Database Activity for IMS Systems view (IDASSUMR)” on page 321</td>
</tr>
<tr>
<td>Database Activity for IMS Systems, interval</td>
<td>IDASSUM</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity Detail for an IMS System, real time</td>
<td>IDASDTLR</td>
<td>“Database Activity Detail for an IMS System view (IDASDTLR)” on page 323</td>
</tr>
<tr>
<td>View</td>
<td>Name</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Database Activity Detail for an IMS System, interval</td>
<td>IDASDTL</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity for Logical Databases (IMS Systems), real time</td>
<td>IDALSUMR</td>
<td>“Database Activity for Logical Databases (IMS Systems) view (IDALSUMR)” on page 324</td>
</tr>
<tr>
<td>Database Activity for Logical Databases (IMS Systems), interval</td>
<td>IDALSUM</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for Physical Databases (IMS Systems), real time</td>
<td>IDAPSUMR</td>
<td>“Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR)” on page 325</td>
</tr>
<tr>
<td>Database I/O Activity for Physical Databases (IMS Systems), interval</td>
<td>IDAPSUM</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for Databases/Volumes (IMS Systems), real time</td>
<td>IDAXSUMR</td>
<td>“Database I/O Activity for Databases Volumes (IMS Systems) view (IDAXSUMR)” on page 327</td>
</tr>
<tr>
<td>Database I/O Activity for Databases/Volumes (IMS Systems), interval</td>
<td>IDAXSUM</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for Volumes (IMS Systems), real time</td>
<td>IDAVSUMR</td>
<td>“Database I/O Activity for Volumes (IMS Systems) view (IDAVSUMR)” on page 328</td>
</tr>
<tr>
<td>Database I/O Activity for Volumes (IMS Systems), interval</td>
<td>IDAVSUM</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity Detail for a VSAM Buffer Pool (IMS Systems), real time</td>
<td>IDABVDTR</td>
<td>“Database Activity Detail for a VSAM Buffer Pool (IMS Systems) view (IDABVDTR)” on page 329</td>
</tr>
<tr>
<td>Database Activity Detail for a VSAM Buffer Pool (IMS Systems), interval</td>
<td>IDABVDTL</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity Detail for an OSAM Buffer Pool (IMS Systems), real time</td>
<td>IDABODTR</td>
<td>“Database Activity Detail for an OSAM Buffer Pool (IMS Systems) view (IDABODTR)” on page 330</td>
</tr>
<tr>
<td>Database Activity Detail for an OSAM Buffer Pool (IMS Systems), interval</td>
<td>IDABODTL</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for VSAM Buffer Pools (IMS Systems), real time</td>
<td>IDABVSMR</td>
<td>“Database I/O Activity for VSAM Buffer Pools (IMS Systems) view (IDABVSMR)” on page 331</td>
</tr>
<tr>
<td>Database I/O Activity for VSAM Buffer Pools (IMS Systems), interval</td>
<td>IDABVSM</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for OSAM Buffer Pools (IMS Systems), real time</td>
<td>IDABOSMR</td>
<td>“Database I/O Activity for OSAM Buffer Pools (IMS Systems) view (IDABOSMR)” on page 332</td>
</tr>
</tbody>
</table>
Table 16 on page 318 lists the views that group information by data sharing group.

**Table 16: Database activity views that group information by data sharing group**

<table>
<thead>
<tr>
<th>View</th>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Activity for Data Sharing Groups, real time</td>
<td>IDAGSUMR</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity for Data Sharing Groups, interval</td>
<td>IDAGSUM</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity Detail for a Data Sharing Group, real time</td>
<td>IDAGDTLR</td>
<td>“Database Activity Detail for a Data Sharing Group view (IDAGDTLR)” on page 333</td>
</tr>
<tr>
<td>Database Activity Detail for a Data Sharing Group, interval</td>
<td>IDAGDTL</td>
<td>None</td>
</tr>
<tr>
<td>Database Activity for Logical Databases (Data Sharing Groups), real</td>
<td>IDALGSMR</td>
<td>None</td>
</tr>
<tr>
<td>time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database Activity for Logical Databases (Data Sharing Groups), interval</td>
<td>IDALGSM</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for Physical Databases (Data Sharing Groups),</td>
<td>IDAPGSMR</td>
<td>None</td>
</tr>
<tr>
<td>real time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database I/O Activity for Physical Databases (Data Sharing Groups),</td>
<td>IDAPGSM</td>
<td>None</td>
</tr>
<tr>
<td>interval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database I/O Activity for Databases/Volumes (Data Sharing Groups),</td>
<td>IDAXGSMR</td>
<td>None</td>
</tr>
<tr>
<td>real time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database I/O Activity for Databases/Volumes (Data Sharing Groups),</td>
<td>IDAXGSM</td>
<td>None</td>
</tr>
<tr>
<td>interval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database I/O Activity for Volumes (Data Sharing Groups), real time</td>
<td>IDAVGSMR</td>
<td>None</td>
</tr>
<tr>
<td>Database I/O Activity for Volumes (Data Sharing Groups), interval</td>
<td>IDAVGSM</td>
<td>None</td>
</tr>
</tbody>
</table>

**Tip**

To access online Help for a view, position the cursor on the view name (in the window information line) and press the **Help** key. To access help for a field, position the cursor on the field and press the **Help** key.
Access the IMS database activity views

You can access a filtered version of the database activity views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFAstr)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- DBCTL Operations Menu (EZDOPSR)
- DBCTL DBA Easy Menu (EZIDBA)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list, or by entering DBACTIVITY on the COMMAND line and then selecting a view from the list of database activity views.

For more specific information about hyperlinks to the database activity views, see the sections that describe the views.

IMS database activity views commands

The IMS database activity views offer primary and line commands.

Primary commands

The following primary commands are available on the IDA* views:

<table>
<thead>
<tr>
<th>Primary command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPD</td>
<td>Create or modify buffer pools</td>
</tr>
<tr>
<td></td>
<td>The command displays the Create/Update Buffer Pool Definitions dialog. Use the dialog to create or edit the buffer pool definitions in the DFSDFxxx member that was used during the startup of IMS.</td>
</tr>
<tr>
<td></td>
<td>You can modify, delete, or add new VSAM or OSAM buffer pool definitions. An IMS type-2 UPDATE POOL command is issued to install the definitions.</td>
</tr>
<tr>
<td></td>
<td>This command is supported for IMS V12 and later only.</td>
</tr>
<tr>
<td>Primary command</td>
<td>Function</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------</td>
</tr>
</tbody>
</table>
| IMSCMDS         | Issue IMS commands  
The command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33. |

## Line commands

The U line command is available on the IDA* views.

The command displays the Create/Update Buffer Pool Definitions dialog. Use the dialog to create or edit the buffer pool definitions in the DFSDF.xxx member identified in the row on which you issued the command.

You can modify, delete, or add new VSAM or OSAM buffer pool definitions. An IMS type-2 UPDATE POOL command is issued to install the definitions.

**Note**  
This command is supported for IMS V12 and later only.

## Analyze an IMS subsystem

To analyze one or more specific IMS subsystems, choose the IMS subsystem with the CONtext command.

Then begin with the Database Activity for IMS Systems view (IDASSUMR for real-time data or IDASSUM for interval data).

You can hyperlink from an IMS Name in the IDASSUM/R view to access the Database Activity Detail for an IMS System view (IDASDTLR for real-time data or IDASDCTL for interval data), which provides the following information about the selected IMS subsystem:

- Number of I/Os per DL/I call
- Number of databases with DL/I calls
- Number of databases with I/O in the sample period
- Number of volumes with I/O in the sample period
You can use the information in the IDASDTL/R view to interpret the averages, rates, and totals reported in other views.

You can also analyze an individual IMS by hyperlinking from fields in the IDASUM/R view to directly access related information in other database activity views.

### Analyze a data sharing group

To analyze a data sharing group, begin with the Database Activity Detail for a Data Sharing Group view (IDAGDTLR for real-time data or IDAGDTL for interval data).

You can hyperlink to the views from the IMS SSI Easy Menu (EZISSI or EZISSIR).

To analyze multiple data sharing groups, begin with the Database Activity for Data Sharing Groups view (IDAGSUMR for real-time data or IDAGSUM for interval data).

You can hyperlink from highlighted fields in the IDAGDTL/R and IDAGSUM/R views to access other database activity views that show related information.

**Tip**

To access accurate information for a data sharing group, set your context to include all IMS subsystems defined in that share group. To set context, use the CONtext command in one of the EZ menus, such as EZIMS or EZISSI, before you access a specific database activity view.

If you do not know which context name to use, you can try using CONtext ALL; the command will display information from every accessible IMS subsystem, but it may include IMS subsystems that are not part of your data sharing group.

### Database Activity for IMS Systems view (IDASSUMR)

The Database Activity for IMS Systems view (IDASSUMR) provides information about database I/O activity and DL/I calls for one or more IMS systems.

You can use the IDASSUMR view to analyze I/O information related to logical databases. The view helps you recognize and solve N-way data sharing problems resulting from I/O contention or buffer cross-invalidation, and it shows DL/I call and I/O event totals, rates, and average times for one or more IMS subsystems.
The IDASSUMR view reports DEDB activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB or GSAM database activity or activity caused by background write.

You can hyperlink to the IDASSUMR view from the:

- **Number of IMS Systems** field in the IDAGDTLR view
- **IMS Name** field in the IDAGSUMR view

**Figure 191: Database Activity for IMS Systems view (IDASSUMR)**

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS Name</td>
<td>Database Activity Detail for an IMS System view (IDASDTLR), which provides detailed information for the selected IMS subsystem</td>
</tr>
<tr>
<td>Data ShrGrp</td>
<td>Database Activity Detail for a Data Sharing Group view (IDAGDTLR), which provides information about database I/O activity and DL/I calls for the selected IMS subsystem</td>
</tr>
<tr>
<td>Call Rate</td>
<td>Database Activity for Logical Databases (IMS Systems) view (IDALSUMR), which shows the DL/I call and I/O statistics at the logical database level for the selected IMS subsystem</td>
</tr>
<tr>
<td>I/O Rate</td>
<td>Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR), where you can see the I/O statistics at the physical database level for the selected IMS subsystem</td>
</tr>
<tr>
<td>VSAMPoolHitRatio</td>
<td>Database I/O Activity for VSAM Buffer Pools (IMS Systems) view (IDABVSMR), which provides database I/O activity information for the selected IMS subsystem, summarized at the VSAM buffer pool level</td>
</tr>
<tr>
<td>OSAMPoolHitRatio</td>
<td>Database I/O Activity for OSAM Buffer Pools (IMS Systems) view (IDABOSMR), which provides database I/O activity information for the selected IMS subsystem, summarized at the OSAM buffer pool level</td>
</tr>
</tbody>
</table>
Database Activity Detail for an IMS System view (IDASDTLR)

The Database Activity Detail for an IMS System view provides detailed information about database I/O activity and DL/I calls for a selected IMS subsystem. Statistics are summarized for the selected system.

You can use the IDASDTLR view to recognize and solve N-way data sharing problems resulting from I/O contention or buffer cross-invalidation, and it shows DL/I call and I/O event totals, rates, and average times.

The IDASDTLR view also provides the following information, which is not included in other database activity views.

- Number of I/Os per DL/I call
- Number of seconds (or minutes, if interval) during which the data has been collected
- Number of databases with DL/I calls
- Number of databases with I/O in the sample period
- Number of volumes with I/O in the sample period

You can use the information in the IDASDTLR view to interpret the averages, rates, and totals reported in other views.

The IDASDTLR view reports DEDB database activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB and GSAM database activity or activity caused by background write.

You can hyperlink to the IDASDTLR view from the:

- Database Activity, Overview option in the IMS Easy Menu (EZIMSR) and the IMS Fast Menu (EZIFASTR)
- **Database Activity Average** fields in the DBCTL Dashboard Menu (DBCMDASH)


- **IMS Name** field in the IDASSUMR view

**Figure 192: Database Activity Detail for an IMS System view (IDASDTLR)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Window</th>
<th>Interface</th>
<th>View</th>
<th>COMMAND</th>
<th>SCROLL</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>15APR2007</td>
<td>15:06:14</td>
<td>1</td>
<td>MainView</td>
<td>W1</td>
<td>IDASDTLR</td>
<td>ALL====</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>IMS Name</strong></td>
<td><strong>I9A</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>19A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Data Sharing Group</strong></td>
<td><strong>NONE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

--- FULL FUNCTION DB I/O ---

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total I/O Seconds</td>
<td>0.05</td>
</tr>
<tr>
<td>Average I/O Time</td>
<td>0.001</td>
</tr>
<tr>
<td>Read I/O AVG</td>
<td>0.002</td>
</tr>
<tr>
<td>Write I/O AVG</td>
<td>0.001</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>4.17</td>
</tr>
<tr>
<td>Write I/O Rate</td>
<td>2.78</td>
</tr>
<tr>
<td>Average Sync Write I/O Rate</td>
<td>2.19</td>
</tr>
<tr>
<td>Read OSAM XI I/O Rate</td>
<td>0.00</td>
</tr>
<tr>
<td>Total I/O Seconds</td>
<td>0.03</td>
</tr>
<tr>
<td>Average I/O Time</td>
<td>0.002</td>
</tr>
<tr>
<td>Read I/O AVG</td>
<td>0.002</td>
</tr>
<tr>
<td>Write I/O AVG</td>
<td>0.001</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>1.59</td>
</tr>
<tr>
<td>OTHER THREAD I/O Rate</td>
<td>1.59</td>
</tr>
</tbody>
</table>

--- DEDB DATABASE I/O ---

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total I/O Seconds</td>
<td>0.03</td>
</tr>
<tr>
<td>Average I/O Time</td>
<td>0.002</td>
</tr>
<tr>
<td>Read I/O AVG</td>
<td>0.002</td>
</tr>
<tr>
<td>Write I/O AVG</td>
<td>0.001</td>
</tr>
<tr>
<td>Read I/O Rate</td>
<td>1.59</td>
</tr>
<tr>
<td>OTHER THREAD I/O Rate</td>
<td>1.59</td>
</tr>
</tbody>
</table>

--- ALL DATABASE I/O ---

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Databases with I/O</td>
<td>5</td>
</tr>
<tr>
<td>Volumes with I/O</td>
<td>8</td>
</tr>
</tbody>
</table>

If a database has excessive I/O, a buffer pool may be too small. You can hyperlink from the IDASDTL **VSAM Bufr Pool Hit Ratio** and the **OSAM Bufr Pool Hit Ratio** fields to access information you can use to determine whether you need to increase the size of the buffer pool.

---

**Database Activity for Logical Databases (IMS Systems) view (IDALSUMR)**

The Database Activity for Logical Databases (IMS Systems) view (IDALSUMR) provides statistics about the activity of logical databases.

You can use the IDALSUMR view to analyze database I/O and DL/I call information related to logical databases and to recognize and solve N-way data sharing problems resulting from badly organized databases, buffer crossinvalidation, or I/O contention.

The IDALSUMR view shows totals, rates, and averages for DL/I calls and I/O events. Statistics are for each open database associated with a PCB (program control block) against which DL/I calls have been made.
The database named in a PCB can be either a physical database or a logical database. Rows in the IDALSUMR view that report on logical databases may include I/O statistics for one or more physical databases.

The IDALSUMR view reports DEDB database activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB and GSAM database activity or activity caused by background write.

You can hyperlink to the IDALSUMR view from the:

- **Databases with calls** field in the IDASDTLR view
- **Call Rate** field in the IDASSUMR view

**Figure 193: Database Activity for Logical Databases (IMS systems) view (IDALSUMR)**

No hyperlinks are available on the view.

**Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR)**

The Database I/O Activity for Physical Databases (IMS Systems) view (IDAPSUMR) provides information about database I/O activity at the physical database level.

You can use the IDAPSUMR view to analyze I/O information related to physical databases and to recognize and solve N-way data sharing problems resulting from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation. The view shows I/O event totals, rates, and average times for open databases, and buffer pool information.

The IDAPSUMR view reports DEDB database activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB and GSAM database activity or activity caused by background write.
Note

For VSAM databases, the **Num Vols** field in some cases may not reflect the actual number of volumes occupied by a specific database. The number of volumes shown can be less than the actual number of volumes if the database has been extended into more than one new volume and has not subsequently been closed and reopened.

If a database is extended into only one new volume, the value shown in the **Num Vols** field will be accurate, even if that database has not been subsequently closed and reopened.

You can hyperlink to the IDAPSUMR view from the:

- **Database Activity, Databases option in the IMS Fast Menu (EZIFASTR)**
- **Database I/O Activity option in the DBCTL DBA Easy Menu (EZIDBA)**
- **Databases with I/O** field in the IDASDTLR view
- **I/O Rate** field in the IDASSUMR view
- **Physical DBNAME** field in the IDALSUMR view

**Figure 194: Database I/O Activity for Physical Databases (IMS systems) view (IDAPSUMR)**

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical DBNAME</td>
<td>Database Overview view (IDBSUMR), which shows database status and provides commands for database management</td>
</tr>
<tr>
<td>Num Vols</td>
<td>Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR), where you can see the statistics broken down by volume and VSAM component and determine more specifically where the I/O is occurring within a specific volume or VSAM component</td>
</tr>
<tr>
<td>Pool ID</td>
<td>Database Activity Detail for a VSAM Buffer Pool (IMS Systems) view (IDABVDTR) for VSAM databases or Database Activity Detail for an OSAM Buffer Pool (IMS Systems) view (IDABODTR) for OSAM databases, which show buffer pool activity for the selected buffer pool</td>
</tr>
</tbody>
</table>
The Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR) provides information about database I/O activity at the database volume level and the VSAM component level.

You can use the IDAXSUMR view to analyze I/O statistics as they relate to the physical database volumes, and in the case of VSAM, as they relate to specific VSAM database components. You can also use the view to recognize and solve N-way data sharing problems resulting from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

IDAXSUMR summarizes information by database, with one row for each volume that the database occupies. A database that occupies more than one volume will have as many lines as it has volumes. The view shows I/O totals, rates, average times, and buffer pool information.

The IDAXSUMR view reports DEDB database activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB and GSAM database activity or activity caused by background write.

**Note**
For VSAM databases, I/O against new extents will not be attributed to a specific volume until the extended database has been closed and reopened. Until the database has been closed and reopened, the I/O will be reported as OTHER in the VolSer field.

You can hyperlink to the IDAXSUMR view from the:

- **Database Activity I/O Rate** fields in the IMS Dashboard view (IMSDASSR)
- Database Activity options in the DBCTL Dashboard Menu (DBCMDASH)
- **Physical DBNAME** field in the IDAVSUMR and IDABSUMR views
- **Databases with I/O** field in the IDABOSMR, IDABVDTR, IDABODTR views
- **Num Vols** field in the IDAPSUMR view

**Figure 195: Database I/O Activity for Databases/Volumes (IMS systems) view (IDAXSUMR)**

<table>
<thead>
<tr>
<th>Physical Database Area/</th>
<th>Physical Database Area/</th>
<th>Physical Database Area/</th>
<th>Physical Database Area/</th>
<th>Physical Database Area/</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBNAME Type Partition DDNAME Type VOLSER Rate AVG Rate AVG ID</td>
<td>DBNAME Type Partition DDNAME Type VOLSER Rate AVG Rate AVG ID</td>
<td>DBNAME Type Partition DDNAME Type VOLSER Rate AVG Rate AVG ID</td>
<td>DBNAME Type Partition DDNAME Type VOLSER Rate AVG Rate AVG ID</td>
<td>DBNAME Type Partition DDNAME Type VOLSER Rate AVG Rate AVG ID</td>
</tr>
<tr>
<td>DB1H PHIDAM DB1H1 DB1H1A OSAM BAB321 4.9 0.001 0.0 0.000 OSM4</td>
<td>DB1H PHIDAM DB1H2 DB1H2A OSAM BAB321 3.7 0.001 0.0 0.000 OSM4</td>
<td>DB1H PHIDAM DB1H2 DB1H2X VSM-D BAB305 3.7 0.001 0.0 0.000 XXXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The following hyperlinks are provided on the view:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical DBNAME</td>
<td>Database Overview view (IDBSUMR), which shows database status and provides commands for database management</td>
</tr>
<tr>
<td>VOLSER</td>
<td>Database I/O Activity for Volumes (IMS Systems) view (IDAVSUMR), where you can see statistics for all I/O to this volume, not just to this database, and where you can see how much of the I/O total is occurring to the volume</td>
</tr>
<tr>
<td>Pool ID</td>
<td>Database Activity Detail for a VSAM Buffer Pool (IMS Systems) view (IDABVDTR) for VSAM databases or Database Activity Detail for an OSAM Buffer Pool (IMS Systems) view (IDABODTR) for OSAM databases, which show buffer pool activity for the selected buffer pool</td>
</tr>
</tbody>
</table>

**Database I/O Activity for Volumes (IMS Systems) view (IDAVSUMR)**

The Database I/O Activity for Volumes (IMS Systems) view (IDAVSUMR) provides database I/O activity information at the volume level.

You can use the IDAVSUMR view to analyze I/O information related to the volumes and to recognize and solve N-way data sharing problems resulting from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

IDAUVSUMR shows information about the database I/O activity that occurs to each volume. For each volume, it identifies I/O totals, rates, and average times for open databases.

The IDAVSUMR view reports DEDB database activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB and GSAM database activity or activity caused by background write.
For VSAM databases, I/O against new extents will not be attributed to a specific volume until the extended database has been closed and reopened. Until the database has been closed and reopened, the I/O will be reported as OTHER in the VolSer field.

You can hyperlink to the IDAVSUMR view from the Database Activity, Volumes option in the IMS Fast Menu (EZIFASTR), from the Volumes with I/O field in the IDASDTRL view, and from the VOLSER field in the IDAXSUMR view.

Figure 196: Database I/O Activity for Volumes (IMS systems) view (IDAVSUMR)

No hyperlinks are available on the view.

Database Activity Detail for a VSAM Buffer Pool (IMS Systems) view (IDABVDTR)

The Database Activity Detail for a VSAM Buffer Pool (IMS Systems) view provides information about a selected VSAM buffer pool, including definitions, specifications, utilization, and database I/O activity.

The IDABVDTR view shows buffer pool activity levels, hit ratios, the average life of a block in a buffer pool, hiperspace space utilization, and I/O statistics. The I/O statistics are for the open databases using the specified buffer pool.

IDABVDTR identifies the databases that have had activity against the buffer pool and the relative I/O expense for database blocks being read, reread, or written.

You can use the IDABVDTR view to optimize a buffer pool definition by checking to see if a pool needs more buffers. The view shows the current relationships of databases to the buffer pool and their current performance, and you can use that information to decide which databases need to be assigned to a separate pool.

After you make buffer pool changes, you can use the TIME command to compare your results with the results from a prior time.

You can hyperlink to the IDABVDTR view from the:
- **VSAM Pool ID** field in the IDABVSMR view
- **Pool ID** field in the IDAPSUMR and IDAXSUMR views

**Figure 197: Database Activity Detail for a VSAM Buffer Pool (IMS systems) view (IDABVDTR)**

<table>
<thead>
<tr>
<th>07SEP2011 15:02:10</th>
<th>MainView WINDOW INTERFACE (V6.0.00)</th>
<th>SCROLL ==&gt; CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ==&gt; 1</td>
<td>ALT WIN ==&gt;</td>
<td>SCROLL ==&gt; CSR</td>
</tr>
</tbody>
</table>

>W1 =IDABVDTR==========I12J46CT=*========07SEP2011==15:02:10====MVIMS==D====1

**BUFFER POOL DEFINITION...**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSAM Pool ID</td>
<td>XXXX</td>
</tr>
<tr>
<td>VSAM Pool Number</td>
<td>3</td>
</tr>
<tr>
<td>VSAM Pool Name</td>
<td>I12J46CT</td>
</tr>
<tr>
<td>Buffer Fix Options</td>
<td>BFR,BLK</td>
</tr>
<tr>
<td>Buffer Size</td>
<td>2048</td>
</tr>
<tr>
<td>Number Buffers</td>
<td>5</td>
</tr>
<tr>
<td>Number Hiperspace Buffers</td>
<td>0</td>
</tr>
<tr>
<td>Proclib Member</td>
<td>DFSVSM1J</td>
</tr>
<tr>
<td>Proclib Section</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**BUFFER POOL STATISTICS...**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hit Ratio</td>
<td>66.667</td>
</tr>
<tr>
<td>Average Time In Pool</td>
<td>5.15</td>
</tr>
<tr>
<td>Retrieve by Key Rate</td>
<td>0.777</td>
</tr>
<tr>
<td>Retrieve by RBA Rate</td>
<td>5.049</td>
</tr>
<tr>
<td>LRECL Alter Rate</td>
<td>0.777</td>
</tr>
<tr>
<td>ESDS LRECL Insert Rate</td>
<td>0.000</td>
</tr>
<tr>
<td>KSDS LRECL Insert Rate</td>
<td>0.388</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

**Database Activity Detail for an OSAM Buffer Pool (IMS Systems) view (IDABODTR)**

The Database Activity Detail for an OSAM Buffer Pool (IMS Systems) view (IDABODTR) provides information about a selected OSAM buffer pool, including definitions, specifications, utilization, and database I/O activity.

The IDABODTR view shows buffer pool activity levels, hit ratios, the average life of a block in a buffer pool, OSAM cache utilization, sequential buffering utilization, and I/O statistics. The I/O statistics are for the open databases that are using the specified buffer pool.

IDABODTR identifies the databases that have had activity against the buffer pool and the relative I/O expense for database blocks being read, reread, or written.

You can use the IDABODTR view to optimize a buffer pool definition by checking to see if a pool needs more buffers. The view shows the current relationships of databases to the buffer pool and their current performance, and you can use that information to decide which databases need to be assigned to a separate pool.
After you make buffer pool changes, you can use the TIME command to compare your results with the results from a prior time.

You can hyperlink to the IDABODTR view from the OSAM Pool ID field in the IDABOSMR view and from the Pool ID field in the IDAPSUMR and IDAXSUMR views.

**Figure 198: Database Activity Detail for an OSAM Buffer Pool (IMS systems) view (IDABODTR)**

<table>
<thead>
<tr>
<th>07SEP2011 15:03:54</th>
<th>&gt;MainView WINDOW INTERFACE (V6.0.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ====&gt; I</td>
<td>ALT WIN ====&gt;</td>
</tr>
<tr>
<td>07SEP2011==15:03:54==MVIMS==D==1</td>
<td></td>
</tr>
</tbody>
</table>

**BUFFER POOL DEFINITION**
- Sample Seconds: 6
- OSAM Pool ID: OSM2
- IMS ID: I12J
- Buffer Fix Options: BFR,BLK
- IMS Name: I12J46CT
- Buffer Size: 2048
- MVS Name: SJSC
- Number Buffers: 5
- Data Sharing Group: NONE
- Proclib Member: DFSVSM1J
- IMS Name: I12J46CT
- Proclib Section: N/A
- DD Names: DFSIVD1
- VOLSERs: BAB301
- DATABASE POOL STATISTICS
- Hit Ratio: 57.143
- Average Time In Pool: 3.283
- Wait for IDENT Rate: 0.000
- Wait for Read Rate: 0.000
- Wait for Write Rate: 0.000
- Block Search Rate: 3.553
- Sync Write Rate: 0.338
- SB Async Seq Read Rate: 0.000
- SB Sync Seq Read Rate: 0.000
- Block Create Rate: 0.000
- Sync Write Rate: 0.338
- Buffer Alter Rate: 1.015
- Purge Call Rate: 0.338

No hyperlinks are available on the view.

**Database I/O Activity for VSAM Buffer Pools (IMS Systems) view (IDABVSMR)**

The Database I/O Activity for VSAM Buffer Pools (IMS Systems) view (IDABVSMR) provides database I/O activity information for VSAM databases summarized at the buffer pool level.

You can use the IDABVSMR view to analyze I/O information related to buffer pools and to recognize and solve N-way data sharing problems resulting from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

IDABVSMR shows I/O totals, rates, and average times for all open VSAM databases.

You can hyperlink to the IDABVSMR view from the:
- VSAM Buffer Pools option in the IMS Fast Menu (EZIFASTR) and the DBCTL DBA Easy Menu (EZIDBA)
- VSAM Wrst Hit and Buf Steal fields in the IMS Dashboard view (IMSDASSR)
- VSAM Bufr Pool Hit Ratio field in the IDASDTLR view
- Worst VSAM Pool Hit Ratio field in the IDAGDTLR view
- VSAMPool HitRatio field in the IDAGSUMR and IDASSUMR views

Figure 199: Database I/O Activity for VSAM Buffer Pools (IMS systems) view (IDABVSMR)

```
07SEP2011 13:42:33 ------ MainView WINDOW INTERFACE (V6.0.00) ----------
COMMAND ===> _______________________________________________ SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===> ___
>W1 =IDABVSMR==========I12J46CT=*========07SEP2011==13:41:02====MVIMS====D====5
-                       VSAM Buffer Pools
  Command: UPD (Create/Modify buffer pools)  IMSCMDS (Issue IMS Commands)
  Linecmd: U   (Modify a selected subpool)
  C VSAM Pool Bufr Num Srch Hit Hprsp HprHit AVGTime DB's     Read  Write
  Pool ID Type Size Bufr Rate  Ratio Bufr  Ratio  InPool  with I/O Rate  Rate
  XXXX DATA  2048    5  1.10  66.7     0   0.00   13.60 IVPDB1I    0.4  0.37
  XXXX DATA   512    5  0.00   0.0     0   0.00       ?            0.0  0.00
  XXXX DATA  1024    5  0.00   0.0     5   0.00       ?            0.0  0.00
  XXXX DATA  4096    5  1.10 100.0     5   0.00       ?            0.0  0.00
  XXXX DATA  8192    5  0.00   0.0     5   0.00       ?            0.0  0.00
```

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSAM Pool ID</td>
<td>Database Activity Detail for a VSAM Buffer Pool (IMS Systems) view (IDABVDTR), where you can see a detailed view of the same buffer pool</td>
</tr>
<tr>
<td>DB’s with I/O</td>
<td>Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR), where you can see the statistics broken down by database volume and VSAM component and where you can see more specifically where the I/O is occurring within a specific volume or VSAM component</td>
</tr>
</tbody>
</table>

Database I/O Activity for OSAM Buffer Pools (IMS Systems) view (IDABOSMR)

The Database I/O Activity for OSAM Buffer Pools (IMS Systems) view (IDABOSMR) provides database I/O activity information for OSAM databases, summarized at the buffer pool level.

You can use the IDABOSMR view to analyze I/O information related to buffer pools. The view helps you recognize and solve N-way data sharing problems.
resulting from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

IDABOSMR shows I/O totals, rates, and average times for all open OSAM databases.

You can hyperlink to the IDABOSMR view from the:

- **OSAM Buffer Pools option** in the IMS Fast Menu (EZIFASTR) and the DBCTL DBA Easy Menu (EZIDBA)
- **OSAM Wrst Hit and Buf Steal** fields in the IMS Dashboard view (IMSDASSR)
- **OSAM Bufr Pool Hit Ratio** field in the IDASDTLR view
- **Worst OSAM Pool Hit Ratio** field in the IDAGDTLR view
- **OSAMPool HitRatio** field in the IDAGSUMR and IDASSUMR views

**Figure 200: Database I/O Activity for OSAM Buffer Pools (IMS systems) view (IDABOSMR)**

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSAM Pool ID</td>
<td>Database Activity Detail for an OSAM Buffer Pool (IMS Systems) view (IDABODTR), where you can see a detailed view of the selected buffer pool</td>
</tr>
<tr>
<td>Databases with I/O</td>
<td>Database I/O Activity for Databases/Volumes (IMS Systems) view (IDAXSUMR), where you can see the statistics broken down by database volume and VSAM and where you can see more specifically where the I/O is occurring within a specific volume or VSAM component</td>
</tr>
</tbody>
</table>

**Database Activity Detail for a Data Sharing Group view (IDAGDTLR)**

The Database Activity Detail for a Data Sharing Group view (IDAGDTLR) provides information about database I/O activity and DL/I calls for a data sharing group.
You can use the IDAGDTLR view to analyze I/O information related to logical and physical databases. The view helps you recognize and solve N-way data sharing problems resulting from I/O contention or buffer cross-invalidation, and it shows DL/I call and I/O event totals, rates, and average times.

The IDAGDTLR view reports DEDB activity if the Event Collector parameter DBFPLVL is set to collect DEDB activity, but it does not report MSDB or GSAM database activity or activity caused by background write.

For more information, view the Quick Course "MainView for IMS - Region and Database Activity".

You can hyperlink to the IDAGDTLR view from the

- Database Activity option in the IMS SSI Easy Menu (EZISSIR) and the DBCTL Operations Menu (EZDOPSR)
- System DB Activity option in the DBCTL DBA Easy Menu (EZIDBA)
- Data ShrGrp field in the IDASSUMR view

**Note**

Only IMS subsystems in your context are included in the count in the IDAGDTL/R Number of IMS Systems field. If any of the IMS subsystems in your data sharing group are not included in your context, the data in the field will be incomplete.

### Figure 201: Database Activity Detail for a Data Sharing Group view (IDAGDTLR)

```
15APR2007 12:11:22 ------ MainView WINDOW INTERFACE (Vx.x.xx) ------------
COMMAND ===> SCROLL ===> PAGE
CURR WIN ===> 1 ALT WIN ===>
W1 =IDAGDTLR=========(ALL======*=======)15APR2007==16:09:16====MVIMS====D====1
Data Sharing Group...... NONE Sample seconds.......... 5.0
Number of IMS Systems... 1

--FULL FUNCTION DB I/O--
Total I/O Seconds... 0.05 DL/I Call Total Seconds... 0.061
Average I/O Time... 0.002 DL/I Call AVG Time...... 0.0014
Read I/O AVG...... 0.002 DL/I Call Rate......... 8.76
Write I/O AVG...... 0.003 DL/I Call Percent I/O... 72.18
Read I/O Rate... 2.99 DL/I Call AVG NBR I/O...... 0.523
Write I/O Rate... 1.20 DB GU Rate.............. 2.59
Sync Write I/O Rate... 1.20 DB GHU Rate......... 1.59
Read OSAM XI I/O Rate... 0.00 DB GN Rate.......... 0.00
DB GNP Rate........ 1.99
DB GHN Rate........ 0.00

--DEDB DATABASE I/O--
Total I/O Seconds... 0.04 DB GNH Rate........... 0.00
Average I/O Time... 0.003 DB ISRT Rate......... 1.00
Read I/O AVG...... 0.002 DB REPL Rate......... 0.60
othread I/O AVG.... 0.003 DB DLET Rate......... 1.00
Read I/O Rate... 1.59 DB OTHER Rate.......... 0.00
othread I/O Rate... 1.59 DB Databases with calls... 4

--ALL DATABASE I/O--
Total I/O Seconds... 5 Worst VSAM Pool Ht Ratio 73.9
Documents with I/O... 8 Worst OSAM Pool Ht Ratio 92.3
Volumes with I/O... 5

```

334  MainView for DBCTL User Guide
No hyperlinks are available on the view.
Manage an IMSplex

An IMSplex is a group of IMS address spaces that work together as a unit. The address spaces share databases, other resources, message queues, or a combination of these. An IMSplex runs in a sysplex environment and uses an IMS Common Service Layer (CSL).

IMSplex management overview

Use the IMSplex views to:

- Analyze IMSplex group members and their status
- Analyze IMSplex connection and utilization information for a specific IMS

View IMSplex information

The following IMSplex views are provided:

- “IMSplex Member Status view (IPXSUMR)” on page 339
- “IMSplex Information view (IMSSPLXR)” on page 340

Tip

To access online Help for a view, position the cursor on the view name (in the window information line) and press the Help key. To access help for a field, position the cursor on the field and press the Help key.
Access the IMSplex views

You can access a filtered version of the IMSplex views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)

You can also access the views by entering a view name on the COMMAND line, by entering VIEWS and then selecting the view from the VIEWS list.

For more specific information about hyperlinks to the IMSplex views, see the sections that describe the views.

IMSplex Information view commands

The IMSplex Information view (IMSSPLXR) offers primary and line commands.

Primary command

The IMSplex Information view (IMSSPLXR) supports the IMSCMDS primary command.

Primary commands are entered on the COMMAND line.

The IMSCMDS primary command displays the Issue IMS commands dialog. Use the dialog to issue IMS Type-1 and Type-2 commands. For more information, see “Issue IMS commands” on page 33.

Line commands

The following line commands are available on the IMSplex Information view (IMSSPLXR):

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>QRP</td>
<td>Issues the IMS QUERY command to display IMS Repository information.</td>
</tr>
<tr>
<td>Line command</td>
<td>Result</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
</tr>
<tr>
<td>QST</td>
<td>Issues the IMS QUERY command to display IMSplex Resource Manager structure information.</td>
</tr>
<tr>
<td>URP</td>
<td>Issues the IMS Update command to update the IMSplex Resource Manager’s use of the repository. Before entering the line command, put <strong>Y</strong> or <strong>N</strong> in the <strong>RM Use Repository</strong> field, to change whether IMS uses the repository. Put a valid access level in the <strong>AUDITACCESS Level</strong> field to change the access level (see the Online Help for the valid level settings).</td>
</tr>
</tbody>
</table>

### IMSplex Member Status view (IPXSUMR)

The IMSplex Member Status view (IPXSUMR) is a real-time or past interval tabular summary view that shows the structure and status of IMSplex group members, including both IMS control region members and SCI component members.

The IPXSUMR is summarized by IMSplex name. Each row includes the member name, status, type, subtype, job name, version, and operating system name. For IMS control regions, the view shows the MainView for IMS product PAS ID, version number, and PUT level.

You can hyperlink to the IPXSUMR view from the:

- **IMSplex Connections options in the IMS SSI Easy Menu (EZISSI)**
- **IMSplex Name** field in the IMSSPLXR view, the performance views (IMSDTL* and DBCDTL*), and the plex performance views (IMSPL* and DBCPL*)
- **IMSplex** field in the IMS Dashboard view (IMSDASSR)
- **IMSplex option in the IMSMPR IMS Menu, the DBCTL Dashboard Menu (DBCMDASH), and the IMS Information Menu (IMSMINFO)**

![Figure 202: IMSplex Member Status view (IPXSUMR)](image)

The following hyperlink is provided on the view:
IMSplex Information view (IMSSPLXR)

The IMSplex Information view (IMSSPLXR) is a real-time or past interval detail view that shows information about the IMSplex connectivity and utilization of a specific IMS subsystem.

The IMSSPLXR view includes information such as:

- Whether the IMS has registered to the SCI, OM, and RM Common Service Layer components
- Command security and LE options for the IMS
- Online change options for the IMS

You can hyperlink to the IMSSPLXR view from the IMSplex Connection option in the IMS Easy Menu (EZIMS) and from the name of an IMS control region member in the Member Name field of the IPXSUMR view.

No hyperlinks are available on the view.
Enable and disable the IMSplex Data Server

The IMSplex Data Server runs in the MainView for IMS product address space (PAS), and is started when the PAS starts.

Due to a software or environmental problem, you may need to enable or disable the IMSplex Data Server.

Enable the IMSplex Data Server

Use one of the following methods to enable the IMSplex Data Server:

- Issue the IPXON primary command on any EZI* menu.
- Use the Set/View Product Level Options display.
- Issue the SETOPTS primary command on any view.
- In the IMSPlax Data Server section, type **Y** in the **Enable in the PAS** field and press **END**.

Disable the IMSplex Data Server

Use one of the following methods to disable the IMSplex Data Server:

- Issue the IPXOFF primary command on any EZI* menu.
- Use the Set/View Product Level Options display.
- Issue the SETOPTS primary command on any view.
- In the IMSPlax Data Server section, type **Y** in the **Disable in the PAS** field and press **END**.
IMS workload definitions overview

Workload definitions are used to define performance objectives for your mission critical applications.

Elements of a workload definition

A dialog box is used to create or modify IMS workload definitions.

You fill in fields in the dialog box with values that describe each workload.

The elements of a workload definition are summarized in the following table and are described in more detail in “Assign the new workload definition settings” on page 348:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload and composite names</td>
<td>A workload name and composite name are assigned to each workload. All workloads that share the same composite name are grouped into &quot;applications.&quot; If your site has the MainView VistaPoint product installed, you can use a shared composite name to combine the performance of workloads running in IMS, CICS, DB2, and the IBM operating system into a common application so that you can view the performance of workloads sharing common tasks.</td>
</tr>
<tr>
<td>Service-level objectives</td>
<td>A service-level objective is defined for each workload. The objective specifies the acceptable performance for a workload. The objective is met if a specified percentage of a workload’s transactions completes within a specified elapsed time.</td>
</tr>
<tr>
<td>Monitoring time range</td>
<td>Start and end time fields are used to specify a monitoring time period for each workload.</td>
</tr>
<tr>
<td>Target ID and system ID</td>
<td>If you want to limit a workload to specific IMS subsystem or IBM operating systems, you can include an IMS target ID, an operating system ID, or both.</td>
</tr>
</tbody>
</table>
Plan IMS workload definitions

Before you create workload definitions, you should:

- Establish conventions for the workloads
- Define the workload service-level objectives for each workload
- Identify a critical monitoring period for each workload

Establish workload conventions

IMS workload definitions are saved in BBPARM member BBFTWK00.

To minimize maintenance time, the BBPARM data set with the BBFTWK00 member should be shared by all MainView for IMS product address spaces. Otherwise, duplicate workload definitions must be created and maintained.

Establishing logical, consistent conventions for workload and composite names is important, especially if all your workload definitions are not stored in a shared BBPARM data set. If you must use multiple BBPARM data sets for workload definitions, maintaining the definitions is much easier if you can quickly identify similar workloads.

- Workload names
  The information in MainView for IMS plex views can be sorted and filtered by workload name. Consistent workload names make it easier to sort and filter views to find the information that you want to display.
  Workload names can be up to eight characters long, and the names should clearly represent the work performed by the target IMS subsystem. For example, the workload name IMSPAY could be used for IMS payroll transactions.

- Composite names
  Composite names should represent a common function of the workloads that are part of a MainView VistaPoint application. For example, a workload composite with the name FINANCE indicates that a workload is part of the financial application. Composite names can be up to eight characters long.
Define workload service-level objectives

A service-level objective specifies the acceptable performance of a workload.

You set a service-level objective based on your assessment of the minimum percentage of transactions that must complete within an elapsed response time for the tasks that occur in a workload.

Workloads that belong to the same composite can have different service-level objectives. MainView for IMS and MainView VistaPoint normalize reported values to maintain consistency.

Identify critical workload monitoring periods

There are periods of time when transaction performance is critical for a particular application, and there are other times, perhaps during the night, when performance is less critical.

You can define a single workload to monitor only during an application’s critical time period, or you can define multiple workloads for the application, with different monitoring periods and response time goals.

All workloads that belong to the same composite workload should have identical monitoring periods. If they have different monitoring periods, views that show combined workload performance might display misleading information.

Create a new workload definition

After you establish the appropriate naming conventions, service-level objectives, and monitoring period, you can create a workload definition by completing the following steps:

1 “Workload Definition List view (IWKLDDEF)” on page 346
2 “Change the view status from browse to edit mode” on page 346
3 “Open the Add IMS Workload Definition dialog box” on page 347
4 “Assign the new workload definition settings” on page 348
5 “Save and install a new workload definition” on page 351
Workload Definition List view (IWKLDDEF)

The Workload Definition List view (IWKLDDEF) is the starting point for defining an IMS workload.

To access the IWKLDDEF view, you can:

- Type IWKLDDEF on any COMMAND line
- Type ADMIN on any COMMAND line and select the IWKLDDEF view
- Type VIEWS on any COMMAND line and select the IWKLDDEF view
- Hyperlink from the Workload Definition option in the IMS Utility Menu (EZIMSU)
- Hyperlink from the Workload Definition option in the IMS Admin Easy Menu (EZIADMIN)

Figure 204: Workload Definition List view (IWKLDDEF), browse mode

<table>
<thead>
<tr>
<th>Workload Name</th>
<th>Description</th>
<th>Status</th>
<th>Response</th>
<th>Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSPAY</td>
<td>Accounts payable</td>
<td>Act 0.30</td>
<td>90</td>
<td>0</td>
</tr>
<tr>
<td>IMSREC</td>
<td>Accounts receivable</td>
<td>Act 0.30</td>
<td>90</td>
<td>0</td>
</tr>
<tr>
<td>IMSRET</td>
<td>Accounts return</td>
<td>Act 1.00</td>
<td>95</td>
<td>0</td>
</tr>
<tr>
<td>IMSTEST</td>
<td>IMS testing</td>
<td>Act 0.30</td>
<td>95</td>
<td>0</td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the IWKLDDEF view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload Name</td>
<td>Workload Detail view (IWLKDDET), which displays details about the selected workload</td>
</tr>
</tbody>
</table>

Change the view status from browse to edit mode

To add a workload definition (or change an existing workload definition), you must switch from browse mode to edit mode by typing EDIT on the IWKLDDEF COMMAND line and pressing Enter.
An edit lock is set on BBPARM member BBFTWK00, and the IWKLDDEF view is displayed with edit mode indicated in the view information line, as shown in the following figure:

**Figure 205: IWKLDDEF Workload Definition List view, edit mode**

```
15APR2007  16:17:39 ------ MainView WINDOW INTERFACE(R4.0.01)------------------
COMMAND ====> SCROLL ===> CSR
CURR WIN ====> 1 ALT WIN ===>>
>W1 =IWKLDDEF==========I9AM31CT=*========(00 EDIT          )====MVIMS====D====2
CMD Workload Composite % S
--- Name     Name      Target   System   Description             Sta Resp Tra T
IMSPAY   FINANCE   IMSxxx   *        Accounts payable        Act 0.30  90 0
IMSREC   FINANCE   IMSxxx   *        Accounts receivable     Act 0.30  90 0
IMSRET   FINANCE   IMSxxx   *        Accounts return         Act 1.00  95 0
IMSTEST  TEST0131  IMS*     *        IMS testing             Act 0.30  95 0
```

The primary commands and line commands provided in the IWKLDDEF view are listed in “IWKLDDEF view primary commands” on page 352 and “IWKLDDEF view line commands” on page 353.

---

**Note**

If someone else is editing the BBFTWK00 member when you type the EDIT command, you will get a message telling you that the member is not available.

---

### Open the Add IMS Workload Definition dialog box

You can use the default workload definition settings or the settings of an existing workload as a basis for the new workload definition.

Use one of the following methods to open the Add IMS Workload Definition dialog box to add a new workload definition:

- In Edit mode, type **ADD** on the IWKLDDEF COMMAND line to open the dialog box with the default workload definition settings.

- In Edit mode, type **ADD** beside an existing workload to open the dialog box using the selected workload’s settings and then specify a new workload name.
The Add IMS Workload Definition dialog box with default settings is shown in the following figure:

**Figure 206: Add IMS Workload Definition dialog box**

<table>
<thead>
<tr>
<th>COMMAND ====&gt;</th>
<th>ADD IMS WORKLOAD DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload ====&gt;</td>
<td>Composite ====&gt;</td>
</tr>
<tr>
<td>For Target ====&gt; *</td>
<td>For System ====&gt; *</td>
</tr>
<tr>
<td>Description ====&gt;</td>
<td></td>
</tr>
<tr>
<td>Tran Id ====&gt;</td>
<td></td>
</tr>
<tr>
<td>Class ====&gt;</td>
<td></td>
</tr>
<tr>
<td>Program ====&gt;</td>
<td></td>
</tr>
<tr>
<td>PSB ====&gt;</td>
<td></td>
</tr>
<tr>
<td>Region ====&gt;</td>
<td></td>
</tr>
<tr>
<td>RegionID ====&gt;</td>
<td></td>
</tr>
<tr>
<td>Terminal ====&gt;</td>
<td></td>
</tr>
<tr>
<td>UserID ====&gt;</td>
<td></td>
</tr>
<tr>
<td>TranType ====&gt; (DLI, DB2, FP) PgmType ====&gt;</td>
<td></td>
</tr>
<tr>
<td>(ALL, MPP, MDP, IFP, FPU, TPI, BMP, DBT, NOTDBT)</td>
<td></td>
</tr>
<tr>
<td>Response time of ====&gt; 1.00 seconds for ====&gt; 100 % of transactions</td>
<td></td>
</tr>
<tr>
<td>Between ====&gt; 00:00 (hh:mm) and ====&gt; 24:00 (hh:mm)</td>
<td></td>
</tr>
<tr>
<td>Include Queuing ====&gt; Y (Y,N)</td>
<td></td>
</tr>
<tr>
<td>Press End to add the definition. Enter CANCEL to leave without adding.</td>
<td></td>
</tr>
</tbody>
</table>

The primary commands available in the workload definition dialog box are listed in “Workload definition dialog boxes commands” on page 353.

### Assign the new workload definition settings

The following fields are used to create a workload definition.

For more information about the fields, press your Help key to access the online Help.

- “Workload and composite fields” on page 349
- “Target and system fields” on page 349
- “Description field” on page 349
- “Resource fields” on page 350
- “Response time and percent of transactions fields” on page 350
- “Start and end time fields” on page 350
- “Include queuing field” on page 351
- “Selection masks” on page 351
Workload and composite fields

Enter the selected names for the workload and composite.

Workload and composite names can be up to eight characters long, but the first character in each name must be an alpha character.

The composite workload name is used by MainView VistaPoint to combine workloads into a single application. Related IMS, CICS, DB2, and operating system workloads must have the same composite name if you want to monitor their combined transaction performance in a MainView VistaPoint application.

Workload name and composite name are required fields. If you do not enter a composite name for a workload, the workload name is automatically assigned as the composite name.

For information about choosing workload and composite names, see “Establish workload conventions” on page 344.

Target and system fields

Enter the complete target ID if you want to restrict the workload to a single IMS subsystem, and enter the system ID if you want to restrict the workload to a single operating system.

You can use wildcards to specify a selection mask that expands a definition to include multiple IMS targets or operating systems. (See “Selection masks” on page 351 for more information.)

Target and system ID are required fields. If no ID is specified in a field, the field must contain an asterisk.

Description field

Enter a description that defines the purpose of the workload.

The description is a required field, and it can be up to 24 characters long.
Resource fields

You can use the resource fields to restrict a workload by transaction ID, class, program name, PSB name, region jobname, region ID, LTERM name, IMS user ID, transaction type, and program type.

The resource fields are optional.

You can use the wildcards to specify a selection mask that expands a definition for the transaction ID, class, program, PSB, region job name, and region ID fields. (See “Selection masks” on page 351 for more information.)

You can use multiple entries, separated by a comma or a space, for the transaction ID, program, PSB, region job name, terminal, and user ID fields. You can use two entries, separated by a comma or a space, for the program type field.

Response time and percent of transactions fields

These fields define the service-level objective for the workload.

In the response time field, enter the response time goal for transactions that occur within the workload target. In the percentage field, enter the minimum percentage of transactions that must complete within the specified response time.

The service-level objective is met if the specified minimum percentage of a workload’s transactions complete within the specified response time.

These fields are required. If you are creating a workload definition from scratch and enter no values in the fields, the default response time of 1.0 seconds and the default percentage of 100% will be used for the workload definition.

Start and end time fields

You can specify a start time and an end time (in the hh:mm fields) to establish a regularly scheduled period of time when MainView VistaPoint monitors collect transaction response time data from targets specified in the workload definition.

Start and end times can span midnight, creating a data collection period of two consecutive days. For example, you can set your start and end times to 08:00 hours.
The previous monitoring period ends at 08:00 hours and the next monitoring period begins immediately at 08:00.

These fields are required. If you are creating a workload definition from scratch and enter no values in the fields, the default start time of 00:00 and end time of 24:00 will be used for the workload definition.

**Include queuing field**

The queuing field specifies whether a workload’s transaction response time will include the time transactions spend in the input queue waiting to be processed.

If the Include Queuing field value is Y (for yes), @RSTM will monitor transaction response time and will include queuing time. If the value is N (for no), @ELTM will monitor transaction response time and will not include queuing time.

**Note**

@RSTM and @ELTM are MainView VistaPoint monitors.

**Selection masks**

You can use wildcards to specify a selection mask that filters the data to be monitored in a workload definition.

You can use an asterisk to represent one or more characters. For example, if you enter IMS* in the target field, all targets that begin with IMS will be included in the workload.

You can use a plus sign or a question mark to represent a single character. For example, if you enter IMS+9 in the target field, all targets that begin with IMS, have any single character in the fourth position, and end with 9 will be included in the workload.

**Save and install a new workload definition**

After you define a new workload in the Add IMS Workload Definition dialog box, you can add the workload to the current workload list by typing the SAVE command in the dialog box command field.
When you return to the IWKLDDEF view, the new workload is included in the workload list with an inactive status and the view mode is changed from EDIT to EDIT MOD, indicating that changes to the workload list are pending. At that point, you can type:

- SAVE on the COMMAND line to save the definition in inactive status and keep the IWKLDDEF view open
- END on the COMMAND line to save the definition in inactive status and return to the previous view
- SAVE on the COMMAND line and then type INStall in the line command area beside the new workload (or type INStall first and then SAVE) to activate the new workload and save it in the workload list
- INStall in the line command area beside the new workload to activate it without saving it

The INStall line command immediately updates the local BBI-SS PAS, and monitoring begins for a new workload as soon as its status changes from inactive to active.

You can create a new workload for temporary use by installing it without saving it in the workload list. When you no longer need the workload, you can delete it before you save the workload list.

---

**Note**

You can hyperlink from the **Workload Name** field in the IWKLDDEF view to access the Workload Definition Detail view (IWKLDDET), which shows information specific to the selected workload.

---

**Workload definition commands**

The workload definition views offer primary and line commands.

**IWKLDDEF view primary commands**

The following primary commands are available on the IWKLDDEF view:

<table>
<thead>
<tr>
<th>Primary command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDIT</td>
<td>Changes the view from browse mode to edit mode, activating the other primary and line commands</td>
</tr>
</tbody>
</table>
### Primary command | Function
--- | ---
**ADD** | Opens the Add IMS Workload Definition dialog box with default workload settings
**CANcel** | Cancels any changes made to the workload list during an edit session by restoring the workload list to the current version in storage (ends the edit mode and returns the view to browse mode)
**SAVE** | Saves any changes made to the workload list and keeps the view in edit mode
**END** | Saves any changes made to the workload list and changes the view from edit mode to browse mode
**PARM DELETED(*)** | Redisplays deleted workloads in a different color if the workload list was not saved after the deletions were made

### IWKLDDEF view line commands

The following line commands are available on the IWKLDDEF view:

| Line command | Function |
--- | ---|
**ADD** | Opens the Add IMS Workload Definition dialog box with the settings for the selected workload definition You can specify a new workload name and use the settings of the selected workload as a template for a new workload definition.
**CHA** | Opens the Change IMS Workload Definition dialog box with the settings for the selected workload definition
**DEL** | Removes a workload from the view and changes its status to deleted
**INS** | Activates a workload with a modified or inactive status (and changes the workload’s status to active)
**UND** | Changes the status of a workload from deleted to the status in effect when the DEL line command was entered against the workload

### Workload definition dialog boxes commands

The following primary commands are available in the dialog boxes for adding and changing workload definitions:

| Primary command | Function |
--- | ---|
**END** | Saves the workload settings and closes the dialog box Changes are not permanently saved until you enter the SAVE or END primary command in the IWKLDDEF view.
Maintain workload definitions

You can update, delete, and recover workload definitions.

Change a workload definition

To change settings for a workload:

1. Access the IWKLDDEF view.

2. Change browse mode to edit mode (by typing EDIT on the COMMAND line).

3. Type CHA in the line command area beside the workload you want to change.

The CHAnge line command opens the Change IMS Workload Definition dialog box with the current settings for the workload. You can then change any field in the dialog box except the workload name field.

After you change the definition, you can either enter the CANcel command to discard the changes or enter the END command to keep the changes intact. Both commands close the dialog box.

When you change a workload’s settings and use the END command to close the Change IMS Workload Definition dialog box, the updates you made are pending. If the workload was in active status, its status is changed to modified (Mod); if it was in inactive status, its status remains inactive. The window information line shows an EDIT MOD status, which means that there are one or more unsaved workload modifications pending.

In the IWKLDDEF view, you can cancel or save changes you made to a workload definition. If you enter the CANcel primary command, all changes made and not saved are discarded and the view mode changes from EDIT MOD mode to BROWSE mode. If you enter the SAVE primary command, all changes are saved, the IWKLDDEF view remains open, and its mode changes from EDIT MOD to EDIT. If

<table>
<thead>
<tr>
<th>Primary command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANcel</td>
<td>Cancels a new workload or changes made to an existing workload and closes the dialog box.</td>
</tr>
<tr>
<td>SAVE</td>
<td>Saves the workload settings without closing the dialog box. Changes are not permanently saved until you enter the SAVE or END primary command in the IWKLDDEF view.</td>
</tr>
</tbody>
</table>
you enter the END command, all changes are saved and the previous view is displayed.

You must install a modified workload definition to activate the changes. When you install the modified workload definition, the original workload is deactivated, and transaction monitoring begins immediately with the updated workload definition, if the current time is within the monitoring time period of the workload. If the current time is not within the workload’s monitoring time period, transaction monitoring will begin when the start time is reached.

Delete and recover workload definitions

To delete a workload definition:

1. Access the IWKLDDEF view.

2. Change browse mode to edit mode (by typing EDIT on the COMMAND line).

3. Type **DEL** in the line command area beside the workload you want to delete

When you enter the DEL line command, the workload definition disappears from the definition list, and its status is changed to deleted. If you enter the SAVE or END command, the workload is permanently deleted and cannot be retrieved.

If you have deleted a workload with the DEL line command and you have not saved the workload list with the SAVE or END command, you can retrieve the deleted workload by entering PARM DELETED(*) on the COMMAND line.

When you enter the PARM DELETED(*) command, the workload reappears in the workload list and is displayed in a different color. To recover the workload, enter the UND undelete line command in its line command area. The undelete command changes the color of the workload line to normal and changes its status from deleted to the status in effect when the DEL line command was entered against the workload.
Manage samplers

A sampler makes observations of the state of one or more target IMS subsystems. Samplings are taken 24 hours a day, two times a second by default or as defined by user-specified sampler parameters.

The observations are accumulated to provide a projection of the continuous state of IMS subsystems and are displayed in views.

There are the following types of samplers:

- CORT (components of transaction response time) samplers observe transaction processing states.
- Workflow samplers observe region usage, resource consumption, and processing throughput.

Tip

You can offload workflow sampler processing to zIIP processors. For more information, see the MainView for IMS and MainView for DBCTL Customization Guide.

Set sampler definitions

MainView for IMS distributes default sampler parameters.

The distributed defaults specify a sampling period of 24 hours a day at two times a second to collect all information for workflow and CORT views. Sampler defaults are used by targets that are not assigned unique sampler definitions.

If your BBPARM data set is shared by all product address spaces (PASs), you can create your own default sampler parameters that override the distributed default sampler parameters. To create a your own default sampler parameters, name a sampler definition DEFAULT.

To create, change, or delete sampler definitions, see “Defining a sampler definition” on page 360.
Sampler administration views

You use the sampler administration views to create, change, or delete sampler definitions.

You use the sampler administration views to set the rate of sampling and the types of information collected. The following sampler administration views are provided:

- "Sampler Administration view (ISAMP)" on page 358
- "Sampler Administration Detail view (ISAMPD)" on page 359

Sampler Administration view (ISAMP)

The Sampler Administration view (ISAMP) view shows all the sampler parameter definitions by target.

Defaults are used for any parameters that are not defined for a target. The default for CORT data is to collect all information 24 hours a day, two times a second. The default for workflow data is to collect information 24 hours a day.

You can access the ISAMP view by:

- Entering ISAMP on the COMMAND line
- Entering ADMIN on the COMMAND line and selecting ISAMP from the list of system and operations administration views
- Entering VIEWS on the COMMAND line and selecting ISAMP from the list of views
- Selecting the Sampler Administration option on the IMS Utility Menu (EZIMSU)

Figure 207: Sampler Administration view (ISAMP)

The following hyperlink is provided on the view:

The following hyperlink is provided on the view:
Sampler Administration Detail view (ISAMPD)

The Sampler Administration Detail view (ISAMPD) shows detailed information about the status and current parameter values in effect for a target selected from the ISAMP view.

The values shown may not be in effect in the following circumstances:

- The sampler parameters were changed and changes were activated with the INStall command, but not saved. The status of the sampler definition is Install. The installed parameters are in effect.

- The sampler parameters were changed and changes were saved, but not installed. The status of the sampler definition is Modified. The saved parameters are the current values. Saved changes are activated when they are installed or the PAS (product address space) is restarted.

You can access the ISAMPD view by:

- Entering ISAMPD on the COMMAND line
- Entering VIEWS on the COMMAND line and selecting ISAMPD from the list of views
- Hyperlinking from the Target field in the ISAMP view

Figure 208: Sampler Administration Detail view (ISAMPD)

No hyperlinks are available on the view.
Defining a sampler definition

Use the sampler administration views to create, change, or delete sampler definitions.

You create a new definition by using the distributed default definition or by using another definition as a model.

**To create a definition**

1. Access a sampler administration view.

   For information about accessing sampler administration views, see the following sections:

   - “Sampler Administration view (ISAMP)” on page 358
   - “Sampler Administration Detail view (ISAMPD)” on page 359

2. Issue the EDIT primary command to start an edit session.

   The window information line changes from BROWSE to EDIT.

3. Do one of the following actions:

   - On the ISAMP view, issue the Add primary command to use the distributed default sampler definition as a model for the new definition.
   - On the ISAMP view, issue the Add line command next to the definition that you want to use as a model for the new definition.
   - On the ISAMPD view, issue the Add primary command to use the displayed definition as a model for the new definition.
The add sampler definition dialog box is displayed as shown in the following figure:

**Figure 209: Add Sampler Definition dialog box**

4 Complete the fields and issue one or more of the following primary commands:

- SAVE to save the definition
- END to save the definition and exit the ISAMP view
- CANcel to discard the definition
- INStall to activate the definition

**To change a definition**

1 Access the ISAMP view (“Sampler Administration view (ISAMP)” on page 358).

2 Issue the EDIT primary command to start an edit session.

   The window information line changes from BROWSE to EDIT.

3 Use the CHA line command next to the definition that you want to use as a model for the new definition.

   The Change Sampler Definition dialog box is displayed.

4 Make the changes you want and press End.

   The status of the definition is changed to Modified.

5 Issue one or more of the following primary commands:
■ SAVE to save the definition
■ END to save the definition and exit the ISAMP view
■ CANcel to discard the definition
■ INStall to activate the definition

To delete a definition

1. Access the ISAMP view (“Sampler Administration view (ISAMP)” on page 358).
2. Issue the EDIT primary command to start an edit session.
   
   The window information line changes from BROWSE to EDIT.
3. Use the DEL line command next to the definition that you want to delete.
   
   The status of the definition is changed to one of the following statuses:
   ■ PendDel
      
      The definition is marked for deletion. Sampling continues until the PAS (product address space) stops, after which the definition is deleted.
   ■ Deleted
      
      The definition is deleted and sampling for the target is discontinued.
4. Do one of the following tasks:
   ■ Issue the END primary command to retain the deletion and exit the ISAMP view.
   ■ Issue the CANcel primary command to discard the deletion.
   ■ Use the UND line command next to the definition to discard the deletion.

Control samplers

You use the sampler operations administration views to:

■ See whether a target is being sampled
■ Control the current state of a sampling with stop, start, or quiesce commands

The following sampler operations administration views are provided:
Sampler Operations Administration view (ISAMPOP)

The Sampler Operations Administration view (ISAMPOP) displays all of the IMS targets that are defined to the product address space (PAS) and the status of the sampler for each target.

On the view, you can use line commands to start, stop, or quiesce target sampling for a target.

You can access the ISAMPOP view by:

- Entering ISAMPOP on the COMMAND line
- Entering ADMIN on the COMMAND line and selecting ISAMPOP from the list of system and operations administration views
- Entering VIEWS on the COMMAND line and selecting ISAMPOP from the list of views
- Selecting the Sampler Operations option on the IMS Utility Menu (EZIMSU)

Figure 210: Sampler Operations Administration view (ISAMPOP)

15APR2007  15:30:48 ------ MainView WINDOW INTERFACE (V.x.xx) -----------
COMMND ===> SCROLL ===> CSR
CURR WIN ===> 1      ALT WIN ===>
W1 =ISAMPOP=-----------------IMSxxx==*==15APR2007==15:30:48=MVIMS==D==4
CMD Target Sampler Time Description
--- -------- Status Status Status ---------------------
IMSxxx Quiesced Inactive Notset
IMSxxx Quiesced Inactive Notset
IMSxxx Quiesced Inactive Notset
IMSxxx Active Active SetTime1 IPSM IMS 9.1 SYSTEM

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>Sampler Operations Administration Detail view (ISAMPOPD), which shows detailed information about the status and parameters in effect for the selected target sampler</td>
</tr>
</tbody>
</table>
The Sampler Operations Administration Detail view (ISAMPOPD) shows detailed information about the status and parameters in effect for a target selected from the ISAMPOP view.

It can help you determine when data is collected for that target.

You can hyperlink to the ISAMPOPD view from the Target field in the ISAMPOP view.

![Figure 211: Sampler Operations Administration Detail view (ISAMPOPD)](image)

No hyperlinks are available on the view.

### Start, stop, and quiesce sampling

In the ISAMPOP view, you can use the following line commands to control target sampling:

<table>
<thead>
<tr>
<th>Line command</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>STArt</td>
<td>Starts sampling the selected IMS target.</td>
</tr>
<tr>
<td>STOp</td>
<td>Stops sampling the selected IMS target.</td>
</tr>
<tr>
<td>Quiesce</td>
<td>Puts the target sampling in a latent state.</td>
</tr>
</tbody>
</table>
View information for database data sets

Use the database data set views to view information about your IMS database data sets.

Database data sets information overview

The database data set views:

- Show attributes and statistics for the IMS database data sets
- Show all DEDB, OSAM, and VSAM database data sets that are currently open with details about those data sets

The following database data set views are provided:

- “Database Data Sets Summary view (IDDSUMR)” on page 366
- “VSAM Database Data Set Detail view (IDDVDTLR)” on page 367
- “OSAM Database Data Set Detail view (IDDODTLR)” on page 367

Access the database data set views

You can access the database data set views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS DBA Easy Menu (EZIDBA, EZIDBAR)
**IMS Resource Menu (EZIMSRS)**

You can also access the views by entering a view name on the COMMAND line, or by entering VIEWS and then selecting the view from the VIEWS list.

---

**Database Data Sets Summary view (IDDSUMR)**

The Database Data Sets Summary view (IDDSUMR) displays OSAM, VSAM, and DEDB data set information.

**Figure 212: Database Data Sets Summary view (IDDSUMR)**

```
24SEP2015  05:29:09 ------- MAINVIEW WINDOW INTERFACE (V6.1.00) ---------------
CURR WIN ==> 1        ALT WIN ===> >M1 =IDDSUMR========14E52CT=*========24SEP2015==05:29:09====MVIMS====D====1

- Database Datasets
  Related Views
    . OSAM datasets only . Database I/O Delays . Database Exceptions
    . VSAM datasets only . Data Set I/O Delays . Database Xref Summary
    . DEDB datasets only . Database Activity . Database Summary

<table>
<thead>
<tr>
<th>Database DB</th>
<th>Area/ Name</th>
<th>Type</th>
<th>Partition Type</th>
<th>DDNAME</th>
<th>Type Type Exts</th>
<th>DS</th>
<th>Comp Num</th>
<th>HiUsed</th>
<th>HiAlloc CI</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBFSAMD5</td>
<td>DEDB</td>
<td>LDGDB</td>
<td>LDGDB</td>
<td>ESDS DATA</td>
<td>N/A</td>
<td></td>
<td>506880</td>
<td>506880</td>
<td>N/A N/A</td>
<td></td>
</tr>
<tr>
<td>CUSTHISAM</td>
<td>HISAM</td>
<td>N/A</td>
<td>CUSTOSAM</td>
<td>ESDS DATA</td>
<td>1</td>
<td>3072</td>
<td>236544</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>DB1H</td>
<td>PART</td>
<td>DB1H1</td>
<td>DB1H1A</td>
<td>OSAM N/A</td>
<td>1</td>
<td>N/A</td>
<td>13 N/A</td>
<td>N/A N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPDB1</td>
<td>HIDAM</td>
<td>N/A</td>
<td>DFSIVD1</td>
<td>OSAM N/A</td>
<td>1</td>
<td>N/A</td>
<td>315 N/A</td>
<td>N/A N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVPDB1I</td>
<td>INDEX</td>
<td>N/A</td>
<td>DFSIVD1I</td>
<td>KSDS DATA</td>
<td>1</td>
<td>645120</td>
<td>645120</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
```

The following hyperlink is available on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDNAME</td>
<td>The hyperlink depends on the condition in the DDNAME, as follows:</td>
</tr>
<tr>
<td></td>
<td>- DEBD – Fast Path DEBD Area Detail view (IFPDTLR), which provides detailed information about a specific Fast Path DEBD area</td>
</tr>
<tr>
<td></td>
<td>- VSAM – VSAM Database Data Set Detail view (IDDVDTLR), which displays details about a VSAM database dataset</td>
</tr>
<tr>
<td></td>
<td>- OSAM – OSAM Database Data Set Detail view (IDDODTLR), which displays details about an OSAM database dataset</td>
</tr>
</tbody>
</table>
VSAM Database Data Set Detail view (IDDVDTLR)

The VSAM Database Data Set Detail view (IDDVDTLR) displays detailed information about a VSAM database data set.

**Figure 213: VSAM Database Data Set Detail view (IDDVDTLR)**

```
24SEP2015  17:58:28 ------ MainView WINDOW INTERFACE (V6.1.00) ---------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===> 
>W1 =IDDVDTLR==========I14E52CT=*========24SEP2015==17:58:28====MVIMS====D====1
VSAM Dataset Details..

Dataset name....... IMS.V111Y.DFSIVD1I.INDX
Database name....... IVP0811               IMS ID................ I11Y
DDNAME............... DFSIVD1I              IMS name.............. I11YIMSG
Database type...... INDEX                  System................ SJSC
VSAM cluster type... KSDS                  Date.................. 28JAN2010
VSAM component type.. INDX                 Time.................. 16:48:42.0
Total extensions..... 1                     CI size............... 4096
High VOLSER......... BAB301                Max record size....... 4089
High allocated RBA... 49152                 CIs per CA............ 12
High used RBA....... 4096                    Key length.......... 10
Free space.......... 45056                  % Free CI in CA....... 0
% Free CI in CA..... 0                     Password protected.... N
% Free bytes in CI... 0                     Num free CI in CA... 0
Num free bytes in CI.. 0                     Write check........... N
CI splits........... 0                     Imbedded seq set...... N
CA splits........... 0                     Replicated NDX recs.. N
SCAN parameter...... N/A                   Ordered by VOL list... N
SEARCHA parameter... N/A                   Total records....... 1
FRSPC parameter..... N/A                   Deleted records..... 0
RAPS parameter...... N/A                    Inserted records.... 0
Largest segment...... 15                     Updated records..... 0
Smallest segment..... 15                     Retrieved records... 0
HALDB dataset detail...
HALDB dataset type... N/A                   EXCPs done by VSAM.... 31
Reorg number......... N/A                   Index component detail
Online Reorg is active N/A                     Levels................ 1
High level RBA...... 0
Partition name....... N/A                   Entries............... 17
Partition ID......... N/A                    Partition name....... N/A
Partition high key... N/A
```

No hyperlinks are available on the view.

OSAM Database Data Set Detail view (IDDODTLR)

The OSAM Database Data Set Detail view (IDDODTLR) displays detailed information about an OSAM database data set.
### Figure 214: OSAM Database Data Set Detail view (IDDODTLR)

<table>
<thead>
<tr>
<th>Time</th>
<th>MainView INTERFACE (V6.1.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24SEP2015 17:59:31</td>
<td>1 alt win ==&gt;</td>
</tr>
</tbody>
</table>

- **Dataset name**: IMS.V111Y.DFSIVD1
- **Database name**: IVPDB1
- **Database type**: HIDAM
- **Dataset type**: OSAM
- **Total extensions**: 1
- **Extendable**: Y
- **Total volumes**: 1
- **High VOLSER**: BAB317
- **High RBN**: 315
- **SCAN parameter**: 3
- **SEARCHA parameter**: 0
- **FRSPC parameter**: 0
- **RAPs parameter**: N/A
- **Largest segment**: 54
- **Smallest segment**: 54
- **HALDB dataset type**: N/A
- **Reorg number**: N/A
- **Online Reorg active**: N/A
- **Partition name**: N/A
- **Partition ID**: N/A
- **Partition high key**: N/A

No hyperlinks are available on the view.
View information for DBRC

Use Database Recovery Control (DBRC) views to obtain information about DBRC and the system log data sets (SLDS).

DBRC information overview

The DBRC views:

- Show attributes and statistics for DBRC
- List SLDS names filtered by a day and time period

The following DBRC views are provided:

- “DBRC Statistics view (IDBRCSTR)” on page 370
- “Query RECON SLDS view (IDBRSLDS)” on page 370

Access the DBRC views

You can access the DBRC views by selecting options from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- IMS DBA Easy Menu (EZIDBA, EZIDBAR)

You can also access the views by entering a view name on the COMMAND line, or by entering VIEWS and then selecting the view from the VIEWS list.
DBRC Statistics view (IDBRCSTR)

The DBRC Statistics view (IDBRCSTR) displays information about DBRC, including the number of calls and reserve requests, I/O response time, and wait time.

Note

This view is available only under the Base Primitive Environment (BPE).

Figure 215: DBRC Statistics view (IDBRCSTR)

<table>
<thead>
<tr>
<th>IMS ID</th>
<th>MVS ID</th>
<th>SJSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O Service LOCATE Reqs...</td>
<td>273 Original DBRC Requests...</td>
<td>34</td>
</tr>
<tr>
<td>I/O Service CHANGE Reqs...</td>
<td>58 Time Spent on Requests...</td>
<td>1.999</td>
</tr>
<tr>
<td>I/O Service WRITE Reqs...</td>
<td>12 No. of Retry Requests...</td>
<td>0</td>
</tr>
<tr>
<td>I/O Service DELETE Reqs...</td>
<td>1 Time Spent on Retries...</td>
<td>0.000</td>
</tr>
<tr>
<td>VSAM GET Requests...</td>
<td>860 Time Spent on Pre-Empting...</td>
<td>0.000</td>
</tr>
<tr>
<td>VSAM PUT Requests...</td>
<td>306 No. Reopen Due To Errors...</td>
<td>0</td>
</tr>
<tr>
<td>VSAM ERASE Requests...</td>
<td>60 No. of OPEN Retries...</td>
<td>0</td>
</tr>
<tr>
<td>No. of RESERVE Requests...</td>
<td>0 No. of COMMIT Errors...</td>
<td>0</td>
</tr>
<tr>
<td>Time Waiting for RESERVES...</td>
<td>0.000 No. of BACKOUT Errors...</td>
<td>0</td>
</tr>
<tr>
<td>RESERVE Reqs for All RECON</td>
<td>35 No. of Batch ENQs...</td>
<td>1</td>
</tr>
<tr>
<td>Time Wait for all RESERVES</td>
<td>1.544 Time Spent for Batch ENQs...</td>
<td>0.000</td>
</tr>
<tr>
<td>No. of DEADLOCKS...</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>No. of Timeouts...</td>
<td>0 Avg Wait Time for Requests</td>
<td>0.021</td>
</tr>
<tr>
<td>Max Parallel REQ Processed</td>
<td>2 Max Wait Time for Request...</td>
<td>0.115</td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Query RECON SLDS view (IDBRSLDS)

The Query RECON SLDS view (IDBRSLDS) lists the system log data sets (SLDSs) for a particular time period. The list includes the record IDs contained in the data sets, eliminating the need to run a batch job to determine in which data set an entry is recorded.

Note

The IMS RESLIB or SDFSRESL load library must be concatenated to the PAS STEPLIB to use the IDBRSLDS view.
Initially, the view is blank. You must specify a date and time range for which you want to display the data sets. The data sets are displayed along with the record IDs in the data set. The earliest date that you can specify is January 1, 2000.

Figure 216: Query RECON SLDS view (IDBRSLDS)

<table>
<thead>
<tr>
<th>Dataset Name</th>
<th>Start Time</th>
<th>End Time</th>
<th>Volser No</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS.SLDS.P13J.D13248.T2356313.V60</td>
<td>23:56:31</td>
<td>00:01:12</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0001120.V5F</td>
<td>00:01:12</td>
<td>00:04:45</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0004452.V5E</td>
<td>00:04:45</td>
<td>00:11:10</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0011109.V5E</td>
<td>00:11:10</td>
<td>00:13:45</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0013457.V5A</td>
<td>00:13:45</td>
<td>00:15:35</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0015354.V61</td>
<td>00:15:35</td>
<td>00:19:47</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0019477.V61</td>
<td>00:19:47</td>
<td>00:26:34</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0026342.V60</td>
<td>00:26:34</td>
<td>00:31:51</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0031512.V5F</td>
<td>00:31:51</td>
<td>00:36:04</td>
<td>BAB386</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0036047.V5F</td>
<td>00:36:04</td>
<td>00:43:09</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0043098.V58</td>
<td>00:43:09</td>
<td>00:44:52</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0044520.V62</td>
<td>00:44:52</td>
<td>00:49:25</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0049259.V62</td>
<td>00:49:25</td>
<td>00:56:04</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0056042.V61</td>
<td>00:56:04</td>
<td>01:00:40</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0100401.V60</td>
<td>01:00:40</td>
<td>01:04:45</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0104457.V60</td>
<td>01:04:45</td>
<td>01:12:07</td>
<td>BAB353</td>
</tr>
<tr>
<td>IMS.SLDS.P13J.D13249.T0149042.V5D</td>
<td>01:49:04</td>
<td>01:52:05</td>
<td>BAB353</td>
</tr>
</tbody>
</table>

You can hyperlink on any data set name to the JCL Generator SLDS menu, where you can create an IRUF or a trace log data set from an SLDS.
View information about your BMC products for IMS

Use the views in this section to display information about MainView for IMS Online. You can display the product's parameter settings, information about the product address space (PAS), zIIP usage, and a list of BMC products for IMS that are active in the same IMS control region.

View a list of IMS products

Use the IMS product views to display a list of BMC performance products that are active in each IMS control region associated with a MainView for IMS product address space (PAS).

The IMS product views:

- Provide a list of BMC IMS-related products that are active in the same IMS control region as the target system
- Include online Help that describes the products and what each provides
- Show the product release and maintenance level
- Indicate product status

The following IMS product views are provided:

- “BMC IMS Products Summary view (IPRDSUM)” on page 374
- “BMC IMS Products Detail view (IPRDDTL)” on page 375
Access the product views

You can access a filtered version of the IPRDDTL view by selecting the Installed Products option from the following menus:

- IMS Easy Menu (EZIMS, EZIMSR)
- IMS Fast Menu (EZIFAST, EZIFASTR)
- IMS SSI Easy Menu (EZISSI, EZISSIR)
- DBCTL Operations Menu (EZDOPSR)
- DBCTL DBA Easy Menu (EZIDBA)

You can also access the IPRSUMR and IPRDDTL views by entering the view name on the COMMAND line, by entering VIEWS and then selecting one of the views from the VIEWS list, or by entering IMSPRODS on the COMMAND line and then selecting one of the views.

BMC IMS Products Summary view (IPRDSUM)

The BMC IMS Products Summary view (IPRDSUM) displays a summary of the BMC products for IMS that are installed in the IMS control regions in the context set by the user.

You can hyperlink from the IPRDSUM Count field to access a view that shows every installation for a specific product.

The IPRDSUM view displays one row for each installed product, and the Count field shows how many IMS subsystems have the associated product installed.

![Figure 217: BMC IMS Products Summary view (IPRDSUM)](image_url)

The help for the Product Name field provides brief product descriptions.

The following hyperlink is provided on the view:
Hyperlink from | To access
--- | ---
Count | BMC IMS Products Detail view (IPRDDTL), which shows information about the selected product

### BMC IMS Products Detail view (IPRDDTL)

The BMC IMS Products Detail view (IPRDDTL) displays a list of the BMC products for IMS that are installed in the IMS control regions in the context set by the user.

The IPRDDTL view displays one row for each IMS on which a product is installed.

If you access the IPRDDTL view by hyperlinking from IPRDSUM, the view displays only information about the product you selected on the IPRDSUM view. If you access the view by entering its name on the COMMAND line, it displays information about all installations of BMC products for IMS.

#### Figure 218: BMC IMS Products Detail view (IPRDDTL)

<table>
<thead>
<tr>
<th>Product</th>
<th>Status</th>
<th>Level</th>
<th>Name</th>
<th>IMS</th>
<th>MVS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutoOPERATOR for IMS</td>
<td>ACTIVE</td>
<td>V7.4.00</td>
<td>I14F52CT QAC3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAINVIEW for IMS</td>
<td>ACTIVE</td>
<td>V5.2.00</td>
<td>I14F52CT QAC3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

### View product parameters

Use the product parameter views to display the settings in the IMFBEX00 and IMFECPOO member of BBPARM.

The IMFBEX00 member of the BBPARM data set defines various product functions, such as trace options, trace logging options, processing limits, and data collection options.

The IMFECPOO member of the BBPARM data set affects what the Event Collector does during an IMS session.

The following product parameter views are provided:

- “IMFBEX Summary view (IBEXSUMR)” on page 376
IMFBEX Summary view (IBEXSUMR)

The IMFBEX Summary view (IBEXSUMR) displays the parameter settings in the IMFBEX00 member of the BBPARM library. The parameters define various product functions, such as trace options, trace logging options, processing limits, and data collection options.

The IBEXSUMR view displays one row for each IMFBEX00 member contained in the current context. Each column in a row is a parameter in the IMFBEX00 member.

You can access the IBEXSUMR view by:

- Entering IBEXSUMR on the COMMAND line
- Entering VIEWS on the COMMAND line and selecting IBEXSUMR from the list of views
- Selecting Misc. PAS Options on the IMS Easy Admin Menu (EZIADMIN)
- Selecting IMFBEX Summary on the IMFECP Summary view (IECPSUMR)
- Selecting Miscellaneous PAS parameters (IMFBEX00) on the Set/View Product Level Options display

Figure 219: IMFBEX Summary view (IBEXSUMR)

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSID</td>
<td>IMFBEX Detail view (IBEXDTLR), which displays detailed information for a specific IMFBEX00 member in the BBPARM library</td>
</tr>
</tbody>
</table>
IMFBEX Detail view (IBEXDTLR)

The IMFBEX Detail view (IBEXDTLR) displays detailed information for a specific IMFBEXnn member in the BBPARM library. Each field is a parameter in the IMFBEXnn member.

You access the IBEXDTLR view by hyperlinking from the IMFBEX Summary view (IBEXSUMR).

Figure 220: IMFBEX Detail view (IBEXDTLR)

No hyperlinks are available on the view.

IMFECP Summary view (IECPSUMR)

The IMFECP Summary view (IECPSUMR) displays the parameter settings in the IMFECP00 member of the BBPARM library. The parameters affect what the Event Collector does during an IMS session.

One row is displayed for each IMFECP00 member contained in the current context. Each column in a row is a parameter in the IMFBEX00 member.
You can access the IBEXSUMR view by:

- Entering IECPSUMR on the COMMAND line
- Entering VIEWS on the COMMAND line and selecting IECPSUMR from the list of views
- Selecting **Event Collector Options** on the IMS Easy Admin Menu (EZIADMIN)
- Selecting **IMFECP Summary** on the IMFBEX Summary view (IBEXSUMR)
- Selecting **Event Collector parameters (IMFECP00)** on the Set/View Product Level Options display

**Figure 221: IMFECP Summary view (IECPSUMR)**

<table>
<thead>
<tr>
<th>IMSID</th>
<th>MVS Member</th>
<th>ACBCount</th>
<th>ACBLIBIO</th>
<th>BACKOUT</th>
<th>BHTO</th>
<th>BILLOVHD</th>
<th>BMP</th>
<th>BMPTRQC</th>
<th>CICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I14F</td>
<td>QAC3</td>
<td>IMFECP00</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>OFF</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSID</td>
<td>IMFBEX Detail view (IBEXDTLR), which displays detailed information for a specific IMFBEX00 member in the BBPARM library</td>
</tr>
</tbody>
</table>

**EC Parm Detail view (IECPDTLR)**

The EC Parm Detail view (IECPDTLR) displays detailed information for a specific IMFECPnn member of a BBPARM library. Each field is a parameter in the IMFECPnn member.
You access the IECPDTLR view by hyperlinking from the IMFECP Summary view (IECPSUMR).

Figure 222: EC Parm Detail view (IECPDTLR)

<table>
<thead>
<tr>
<th>FA Collection</th>
<th>Data Collection</th>
<th>Recovery</th>
<th>BMP........... YES</th>
<th>ACBLIBIO....... YES</th>
<th>ABCOUNT. 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMPTRQC....... NO</td>
<td>BHTO........... OFF</td>
<td>BACKOUT. YES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CICS........... YES</td>
<td>BILLOVHD....... NO</td>
<td>DEPREC. NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPICDB2....... TERM</td>
<td>CPU............ ALL</td>
<td>RGNIOPT. ABEND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPICDLI....... APSB</td>
<td>CPUOvhHD.------- YES</td>
<td>TIMERR.. NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPIC1TRN..... NO</td>
<td>DBFFVL.--------- 1</td>
<td>Misc....</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRNSYNC...... NO</td>
<td>DBFP........... NO</td>
<td>Misc....</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DBPLVL......... 3</td>
<td>MAXDS... 50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DBIO........... IOWAITS</td>
<td>MSCPLOCK DEFAULT,NOTSYNC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DTNAME........... 100</td>
<td>MXPASSQ. 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DBTS.......... 20</td>
<td>SYSID. 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DBTS4BMP....... 20</td>
<td>TELON. NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DTMQLCPU........ NO</td>
<td>DFILTER. NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ETIMEELP....... YES</td>
<td>DFBDCODE , , , , ,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ETIMEIWT....... YES</td>
<td>DFBDCODE , , , , ,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSGQBUF....... 1000</td>
<td>DFESCDE -00000,-00000,-00000,-00000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSGQQTME....... YES</td>
<td>DTIME.. 050000000,050000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ZTIME........... YES</td>
<td>Misc....</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hyperlinks are available on the view.

Set/View Product Level Options display

The Set/View Product Level Options display shows the various product PAS parameter processing options that can be dynamically modified. Certain product level actions can also be performed from here.
You can access the Set/View Product Level Options display by selecting **Product Level Options** on the IMS Easy Admin Menu (EZIADMIN).

**Figure 223: Set/View Product Level Options display**

<table>
<thead>
<tr>
<th>Field</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Collector parameters (IMFECP00)</td>
<td>IMFECP Summary view (IECPSUMR), which displays the parameter settings in the IMFECP00 member of the BBPARM library</td>
</tr>
<tr>
<td>Miscellaneous PAS parameters (IMFBEX00)</td>
<td>IMFBEX Summary view (IBEXSUMR), which displays the parameter settings in the IMFBEX00 member of the BBPARM library</td>
</tr>
</tbody>
</table>

**View PAS, data refresh, and CPU usage information**

The product provides views that display information about the product address space (PAS), the number of data refreshes for data used by the product, and about CPU usage by the product.

The following views are provided:

- “PAS Information view (PASINFO)” on page 166
- “Product CPU Utilization view (IPUCPU)” on page 382
- “Data Refreshes view (IPUVDR)” on page 383
PAS Information view (PASINFO)

The PAS Information (PASINFO) view provides general information about the product address space (PAS) and the target.

It also shows information about traces and timers, including status information, some statistics, default parameters that are in effect, and a summary of the active timer requests. The information is shown for the BBI-SS that is associated with the specified target.

Access the PASINFO view by entering PASINFO on the COMMAND line.

Figure 224: PAS Information view (PASINFO)

The following hyperlinks are provided on the view:

<table>
<thead>
<tr>
<th>Hyperlink from</th>
<th>To access</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS ID</td>
<td>List of targets from which to select to change the context</td>
</tr>
<tr>
<td>CAS ID</td>
<td>CASINFO view, where you can obtain detailed information about the CAS, and the availability of services to perform functions</td>
</tr>
<tr>
<td>Target</td>
<td>Active Monitors view (AT or MONACTV) for that target, which displays the list of monitors that have been started for the target</td>
</tr>
</tbody>
</table>
Active Monitors view (AT or MONACTV) for that target, which displays the list of monitors that have been started for the target.

Monitor Overview (ISERV) view, to show monitors with the status indicated by the field header.

### Product CPU Utilization view (IPUCPU)

The Product CPU Utilization view (IPUCPU) shows CPU and IBM System z Integrated Information Processor (zIIP) usage for a MainView for IMS Online or MainView for DBCTL product address space (PAS).

You can access the IPUCPU view by entering IPUCPU on the COMMAND line.

#### Figure 225: Product CPU Utilization view (IPUCPU)

<table>
<thead>
<tr>
<th>Target</th>
<th>I14E52CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSID</td>
<td>I14E</td>
</tr>
<tr>
<td>View Data Refreshes</td>
<td>32</td>
</tr>
<tr>
<td>Total PAS ECPU seconds</td>
<td>27.328</td>
</tr>
<tr>
<td>% FA processor Task</td>
<td>0.00</td>
</tr>
<tr>
<td>% View Data Tasks</td>
<td>3.22</td>
</tr>
<tr>
<td>% Master Task</td>
<td>0.05</td>
</tr>
<tr>
<td>% Sampler Control Task</td>
<td>0.59</td>
</tr>
<tr>
<td>% Sampler Task/SRB</td>
<td>30.11</td>
</tr>
<tr>
<td>% zIIP</td>
<td>6.27</td>
</tr>
<tr>
<td>% Subinterval Task</td>
<td>0.39</td>
</tr>
<tr>
<td>% Other</td>
<td>65.64</td>
</tr>
<tr>
<td>Sampler Task/SRB seconds</td>
<td>8.229</td>
</tr>
<tr>
<td>% zIIP</td>
<td>20.82</td>
</tr>
<tr>
<td>zIIP seconds</td>
<td>1.713</td>
</tr>
<tr>
<td>zIIP on CP seconds</td>
<td>0.000</td>
</tr>
<tr>
<td>View SRB Time (seconds)</td>
<td>0.000</td>
</tr>
<tr>
<td>% zIIP</td>
<td>0.00</td>
</tr>
<tr>
<td>zIIP seconds</td>
<td>0.000</td>
</tr>
<tr>
<td>zIIP on CP seconds</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The following hyperlink is provided on the view:

Data Refreshes view (IPUVDR), which shows how many data refreshes were done for the various types of data shown on MainView for IMS Online or MainView for DBCTL views.
Data Refreshes view (IPUVDR)

The Data Refreshes view (IPUVDR) shows how many data refreshes were done for the various types of data shown on MainView for IMS Online or MainView for DBCTL views.

You can access the IPUVDR view by:

- Entering IPUVDR on the COMMAND line
- Hyperlinking from View Data Refreshes on the Product CPU Utilization view (IPUCPU)

Figure 226: Data Refreshes view (IPUVDR)

21OCT2015 03:08:32 ------ MAINVIEW WINDOW INTERFACE (V6.1.00) ----------------
CURR WIN ===> 1 ALT WIN ===> 
W1 =IPUVDR============I14F52CT=*========21OCT2015==03:08:32====MVIMS====D====1
Data Refreshes
Target................... I14F52CT
APP...................... 0 Message Queue Pool Stats 0
Balancing Groups (BALG)... 0 MFS..................... 0
Class Activity............... 0 MSC..................... 0
CORT - Tran delay........... 0 ODBM.................... 0
CORT - Tran I/O delay...... 0 OTMA................. 0
CORT - Tran Lock delay..... 0 OTMA Descriptors.. 0
CORT - Tran Latch delay... 0 PK (PEEK)............ 0
DashBoard, IMSplex, other 0 PI Locking........... 0
Databases.................. 0 Pool - ACBIN64 ...... 0
Database Buffers........... 0 Pool - MFS.......... 0
Database/Buffer Activity. 5 Pool - PSB........ 0
DBRC Services................ 0 Pool - IMS....... 0
DBRC Statistics................ 0 Pool - fixed non-CBT ... 0
DEDB Areas.................. 0 Pool - fixed non-CBT ... 0
Dispatcher Statistics....... 0 Product Parameters... 2
DL/I Call Status........... 0 Programs............. 0
Energizer CMD Output....... 0 Program Schedule..... 0
Energizer Logger Trace..... 0 Real Storage....... 0
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FP Route Code.............. 0 Region Occupancy..... 0
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IMS Parameters............... 0 This view, menus, other... 2
IMS Scheduling............. 0 Trace - Query......... 0
IMSplex...................... 0 Trace - Summarized... 0
IMSplex and Diagnostic..... 0 Trace - Expanded..... 0
Installed Products......... 2 Trace - Tran Summary... 0
IRLM Locking............. 8 Trace - Tran Detail.... 0
IRLM Status................ 0 Transactions........ 0

No hyperlinks are available on the view.
View PAS, data refresh, and CPU usage information
Manage Daylight Savings Time

This appendix describes the impact of Daylight Savings Time changes on the monitors.

The biannual changes for Daylight Savings Time require you to restart your monitors or perform a PAS recycle in order to ensure the accuracy of the time stamps in realtime as well as for historical data.

BMC recommends restarting the monitors via block members that can be stopped and restarted using automation after the ALnnnn DST change message is sent from MainView AutoOPERATOR.
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