MAINVIEW® for IMS Online
IPSM Reference Manual

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bmcsoftware

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Before Contacting BMC Software

Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
  - product name
  - product version (release number)
  - license number and password (trial or permanent)
- operating system and environment information
  - machine type
  - operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as `file system full`
  - messages from related software

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How to Use This Book

This book documents the features and functions of the IMSPlex System Manager (IPSM), a MAINVIEW® for IMS Online component.

IPSM works in the MAINVIEW window environment to provide SSI (single system image) views about the performance of multiple IMS regions and systems. Authorized users can use a single terminal to watch not only multiple IMSs but also CICS, DB2, and OS/390 from a single point of control.

This book is intended for use by the IMS master terminal operator (MTO), system programmer, database administrator, or performance analyst who monitors the status, activity, and performance of IMS and its resources.

For information about new features in the current release of MAINVIEW for IMS Online, see the product Release Notes, which are available on the BMC Software Support Web pages.

You can view this book online with Adobe Acrobat Reader; contact your system administrator for assistance.

MAINVIEW for IMS Product Library

The MAINVIEW for IMS product library contains the following documents.

MAINVIEW for IMS **Online:**

MAINVIEW for IMS Online – Customization Guide

MAINVIEW for IMS Online – IPSM Reference Manual (this book)

MAINVIEW for IMS Online – Analyzers Reference Manual

MAINVIEW for IMS Online – Monitors and Traces Reference Manual

MAINVIEW for IMS Online – Release Notes

MAINVIEW for IMS **Offline:**

MAINVIEW for IMS Offline – Customization and Utilities Guide

MAINVIEW for IMS Offline – Performance Reporter Reference Manual

MAINVIEW for IMS Offline – Transaction Accountant Reference Manual

MAINVIEW for IMS Offline – Release Notes

Note: Although MAINVIEW for IMS is often referred to as “MVIMS” in this book, the abbreviation is used for brevity only and does not represent a legal product name of BMC Software.

How This Book Is Organized

This book contains the following parts:

- Part 1 describes IMSPlex System Manager (IPSM).
- Part 2 describes how to use IPSM to optimize IMS performance. It describes
  - IMS workflow views
  - transaction response time and delay views
  - transaction trace views
  - monitor views
  - workload definitions
- Part 3 describes how to use IPSM to solve realtime problems. It describes
  - region views
  - IRLM lock views
  - terminal and user status views
  - OTMA views
- Part 4 describes how to use IPSM to manage IMS operations. It describes
  - Fast Path DEDB area views
  - database views
  - program views
  - cross-reference views
  - IMS database activity views
  - CQS views
- Part 5 describes system administration and operations views used to define an IMS workload and set and control the sampling of a target system. IPSM collects the target system samplings for the components of response time (CORT) and workflow views. Part 5 also provides information about controlling the collection of shared message queue data, securing resources, and accessing IMS product lists

Related MAINVIEW Products

The related MAINVIEW-based products include

- MAINVIEW® AutoOPERATOR™
- MAINVIEW® for CICS
- MAINVIEW® for DB2®
- MAINVIEW® for DBCTL
- MAINVIEW® FOCAL POINT
- MAINVIEW® for MQSeries
- MAINVIEW® for OS/390
- MAINVIEW® VistaPoint™

Customization and administration instructions for the MAINVIEW-based functions are provided in the *MAINVIEW Common Customization Guide*. The following manuals document product-specific customization instructions:

- *MAINVIEW AutoOPERATOR Customization Guide*
- *MAINVIEW for CICS Customization Guide*
- *MAINVIEW for DB2 Customization Guide*
- *MAINVIEW for DBCTL Customization Guide*
- *MAINVIEW for IMS Online – Customization Guide*
- *MAINVIEW for IMS Offline – Customization and Utilities Guide*
- *MAINVIEW for OS/390 Customization Guide*

The following books document the use of general services common to MAINVIEW for IMS and related products:

- *MAINVIEW AutoOPERATOR Basic Automation Guide*
- *MAINVIEW AutoOPERATOR Advanced Automation Guide for CLIST EXECS*
- *MAINVIEW AutoOPERATOR Advanced Automation Guide for REXX EXECS*
- *MAINVIEW for CICS PERFORMANCE REPORTER User Guide*
- *MAINVIEW for DB2 User Guide*, Volumes 1, 2, and 3
- *MAINVIEW for DBCTL Analyzers, Monitors, and Traces Reference Manual*

Related IBM Publications

OS/390 Initialization and Tuning Guide
IMS Operator Reference
System Administration Guide

Conventions Used in This Manual

The following symbols are used to define command syntax, are ***not*** part of the command, and should never be typed as part of the command:

- Brackets [ ] enclose optional parameters or keywords.
- Braces { } enclose a list of parameters; one must be chosen.
- A line | separates alternative options; one can be chosen.
- An <u>underlined</u> parameter is the default.

The following command syntax conventions also apply:

- An ITEM IN CAPITAL LETTERS must be typed exactly as shown.
- Items in *italicized, lowercase* letters are values that you supply.
- When a command is shown in uppercase and lowercase letters, such as **HSplit**, the uppercase letters show the command abbreviation that you can use (**HS**, for example). The lowercase letters complete the entire command name. Typing the entire command name is an optional, alternative way of entering the command.
- Commands without an abbreviation (**END**, for example) appear in all uppercase letters.

Part 1. Introducing IMSPlex System Manager (IPSM)

This section introduces IPSM and describes the benefits it provides.

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Chapter 1. How IPSM Can Work for You

IMSPlex System Manager (IPSM) provides Single System Image views of resources and bottlenecks. This applies to applications across single or multiple IMS regions and systems. IPSM exploits IBM Parallel Sysplex technology and simplifies the management of IMS applications on traditional mainframes.

IPSM helps you

- Optimize system performance

  IPSM helps you discover performance and workload problems wherever they occur—across multiple OS/390 and IMS systems. With IPSM, you can

  – Manage the progress, throughput, and response times of IMS workloads and transactions

  – Examine workload throughput and capacity, as well as region occupancy for IMS and IMSPlex systems

  – Identify workload bottlenecks and delays caused by resource and capacity constraints

  – Find alternative resources to eliminate workload queuing

- Solve realtime problems

  IPSM helps you solve realtime problems quickly. IPSM makes it easy to

  – Monitor region activity

  – Recognize and resolve N-way data sharing contention

  – Monitor users and terminals across single or multiple systems

  – Monitor the status of OTMA clients, servers, and the transactions they are running

- Manage IMS operations

  IPSM is a powerful tool for managing IMS operations. You can use it to

  – Control and manage Fast Path DEDB areas

  – Control and manage full-function databases

  – Control and manage application programs

  – Cross-reference IMS resources—databases, programs, and transactions

  – Recognize and solve problems with IMS database activity

  – Manage and solve problems with IMS shared message queuing

IPSM puts you in the MAINVIEW window environment as it monitors and reports the information you need to see.

Benefits of Using IPSM

From a single user session, you can monitor and analyze the performance of one or more IMS systems across a sysplex. You can transfer quickly to other MAINVIEW products and you can manage CICS, DB2, and OS/390 from a single point of control.

IPSM collects and organizes the information you want into online views:

Workflow views allow system programmers to determine how much IMS transaction processing capacity is available and how much is being used at any given time. The views show any capacity shortages and recommend the number of regions needed to avoid creating a backlog of messages. Dynamic workload reconfiguration allows system programmers to dynamically change class assignments and transaction attributes directly from the display.

Transaction delay analysis 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, a data-sharing group, OS/390, or an entire sysplex.

Response time views show a picture of the life cycle of IMS transactions. System programmers can use these views to determine whether a transaction is being held up in queuing, scheduling, application processing, database access, or sync point processing.

Realtime problem-solving views help operators and system programmers solve realtime problems involving resources and users across single or multiple IMS systems. The views allow easy monitoring of region activity, users and terminals, and OTMA clients and servers. They also permit a quick analysis of lock problems, making it much easier to recognize and resolve N-way data sharing resource contention.

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, which allow easy cross-referencing of IMS resources, also assist in the management of IMS database activity and shared message queuing.

Figure 1 on page 5 gives you an overview of IPSM and the many views it provides.

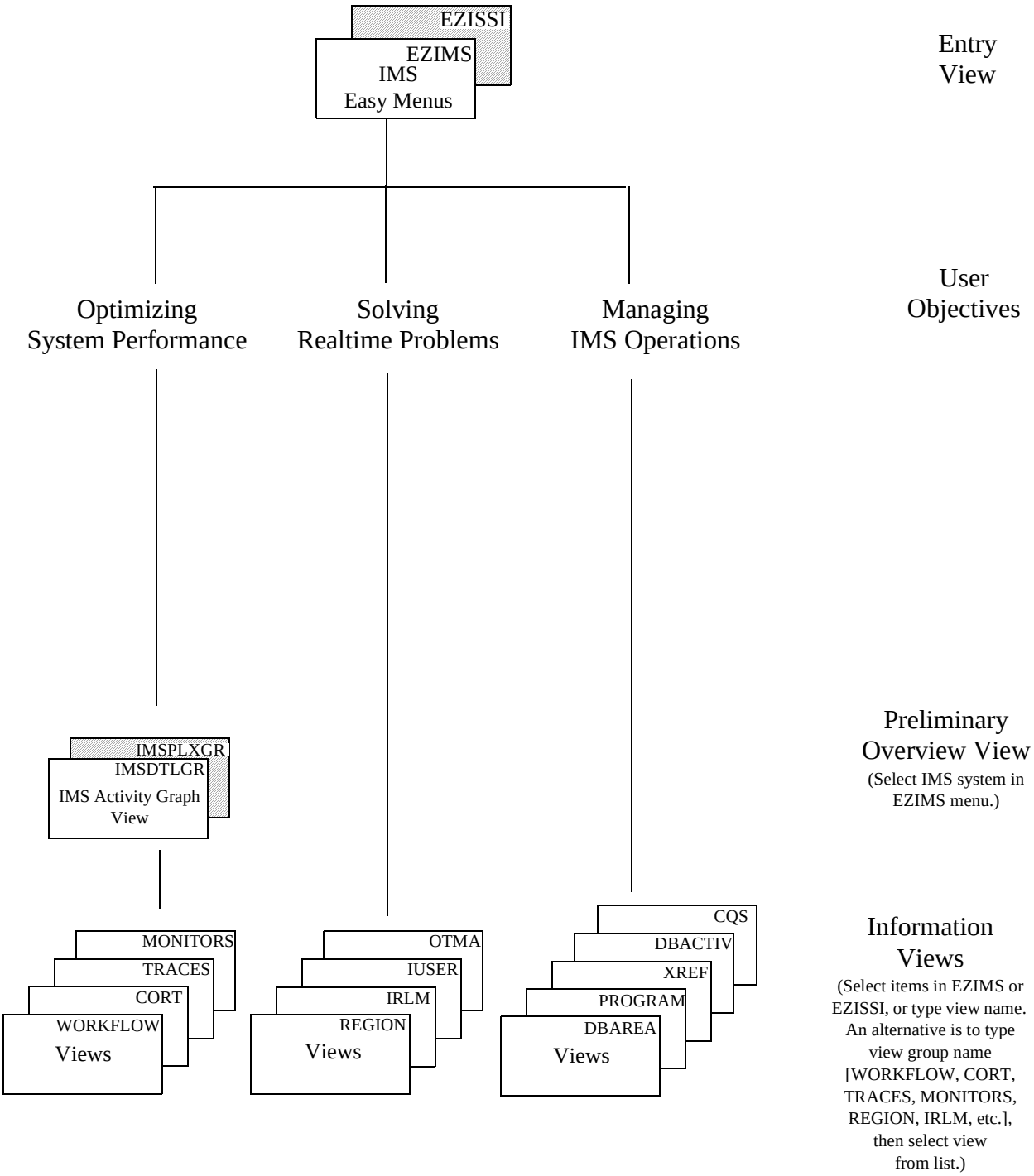

Figure 1. Overview of IPSM

Shaded boxes denote sysplex version of a view.

Figure 2 on page 7 gives you an overview of how to use IPSM to optimize system performance.

See Part 2 of this book (“Optimizing System Performance”) for a description of how you can use IPSM views to

- Manage your IMS workflow
- Analyze transaction response
- Determine the causes of transaction delays

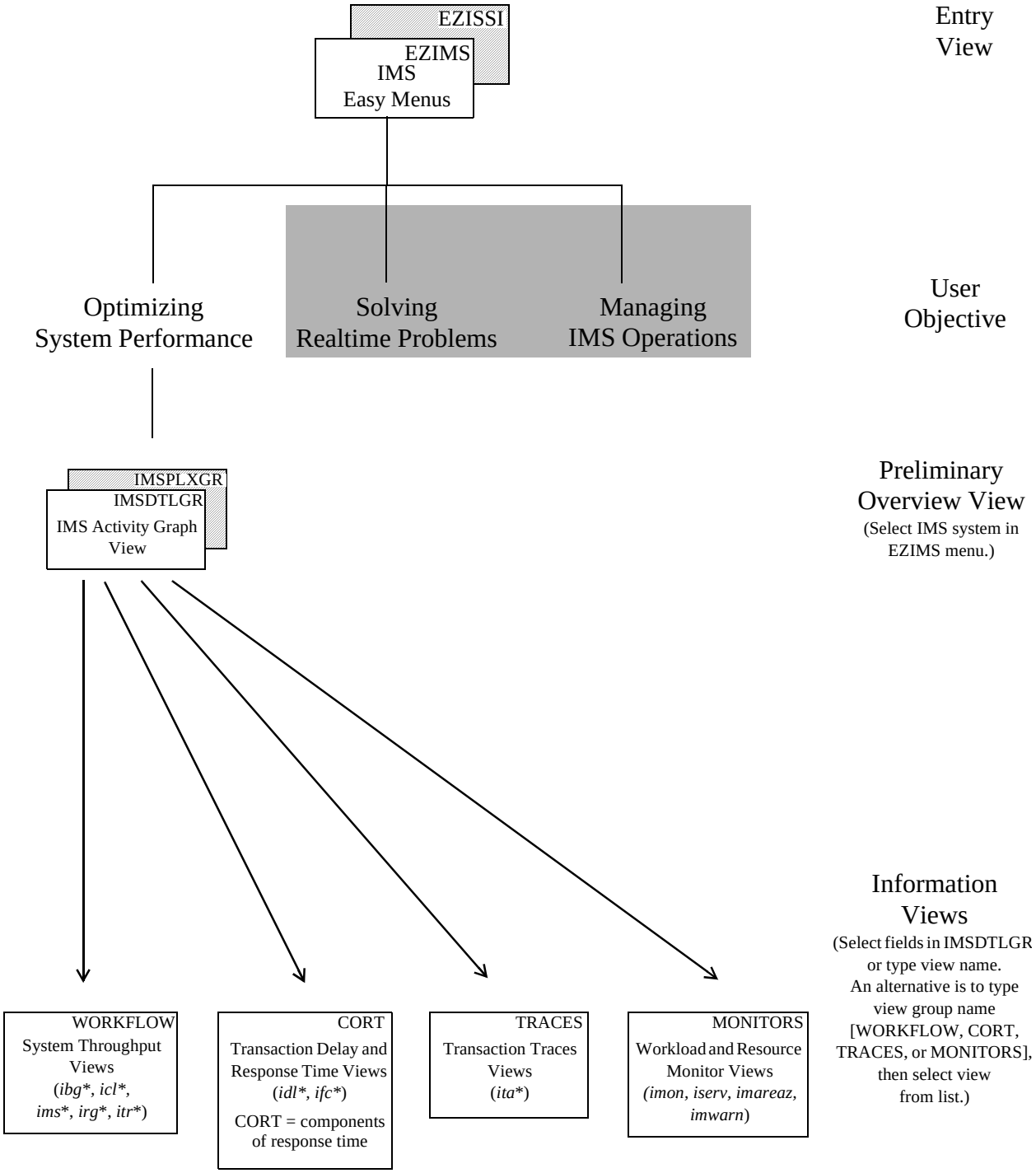

Figure 2. Using IPSM to Optimize System Performance

---

* To see a list of these views, type VIEWS *nnn** (where *nnn* represents the first three characters of the view name). You can then select a view from the list displayed.

Figure 3 on page 9 gives you an overview of how to use IPSM to solve realtime problems.

See Part 3 of this book (“Solving Realtime Problems”) for a description of how you can use IPSM views to analyze and solve realtime problems in the areas of

- Region activity
- IRLM locking
- Terminals and users
- OTMA clients and servers

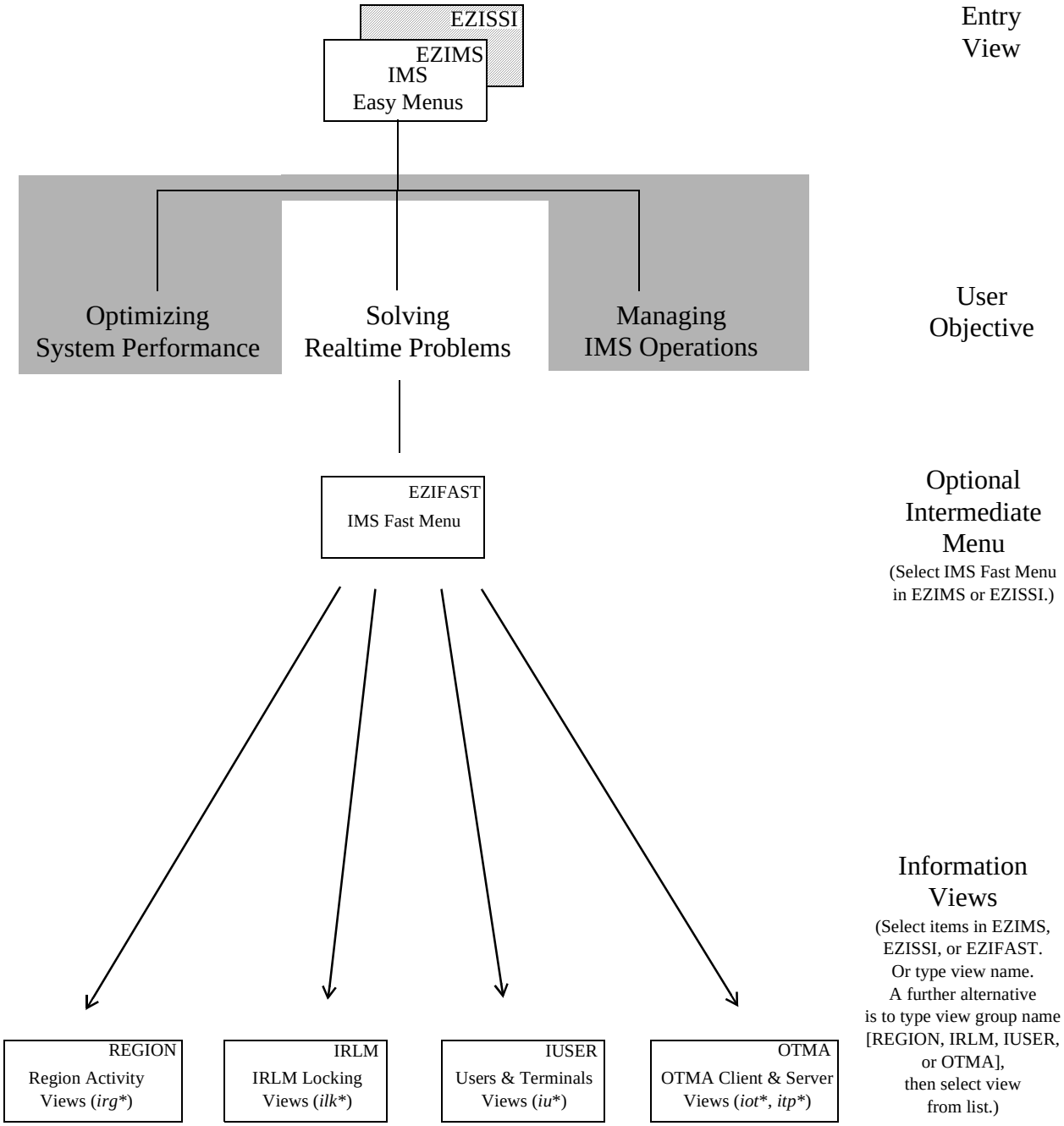

Figure 3. Using IPSM to Solve Realtime Problems

---

* To see a list of these views, type VIEWS *nn–nnn** (where *nn–nnn* represents the first several characters of the view name). You can then select a view from the list displayed.

Figure 4 on page 11 gives you an overview of how to use IPSM to manage IMS operations.

See Part 4 of this book (“Managing IMS Operations”) for a description of how you can use IPSM views to manage IMS operations, including

- Fast Path DEDB areas
- IMS databases
- Application programs
- Cross-referencing databases, programs, and transactions
- Database activity
- Shared message queuing

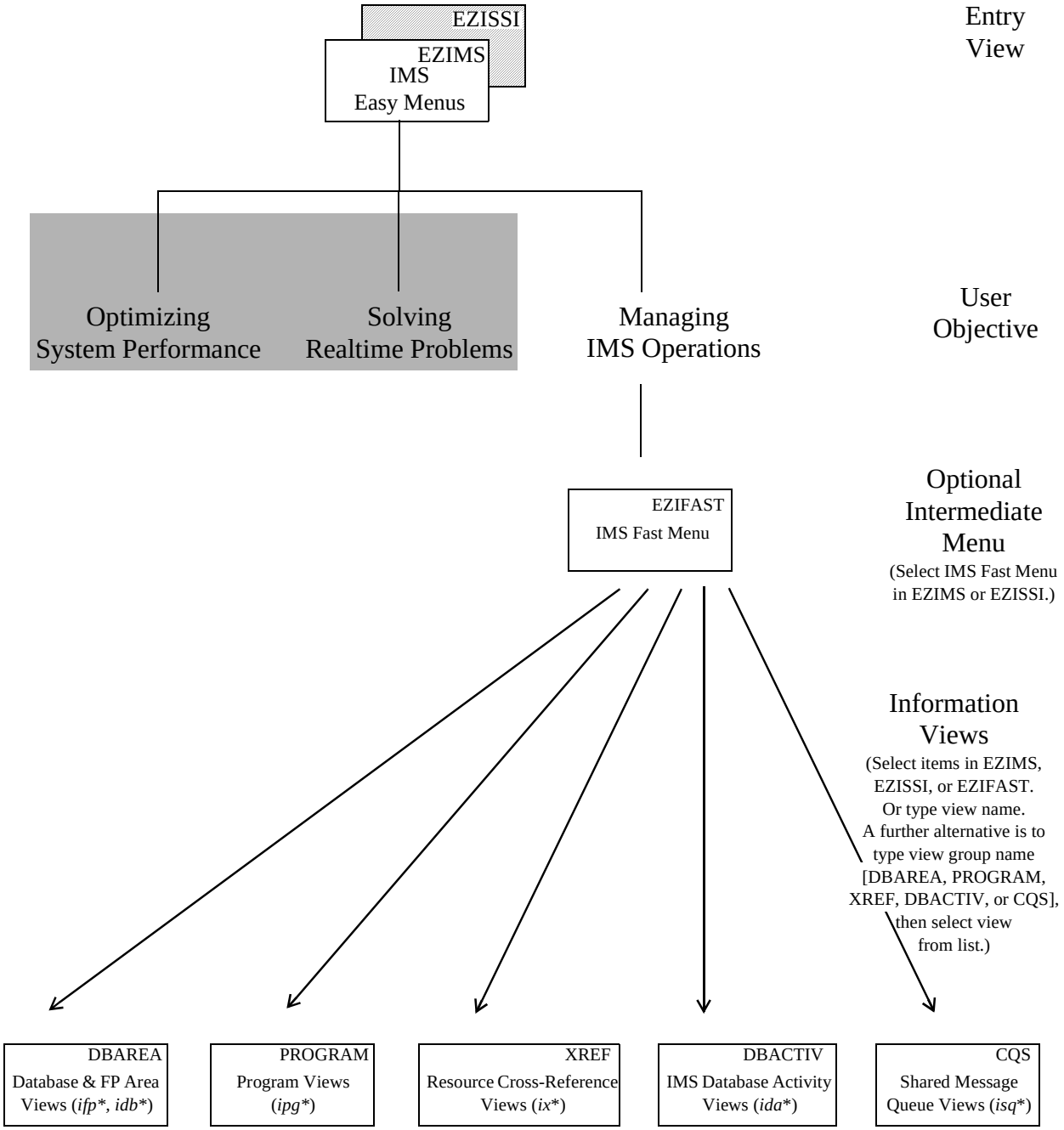

Figure 4. Using IPSM to Manage IMS Operations

---

* To see a list of these views, type VIEWS *nn–nnn** (where *nn–nnn* represents the first several characters of the view name). You can then select a view from the list displayed.

How IPSM Works with MAINVIEW for IMS

IPSM views provide you with direct hyperlinks to other MAINVIEW for IMS (MVIMS) services. You can use IPSM views to quickly spot potential problem areas, then access other views for more definitive problem determination.

IPSM views direct you to the information you need:

- Detailed analyzer information about the interaction of IMS transactions under varying processing conditions
- Precise analyzer workload performance details, so you can determine causes of overloads or contention
- Traces of transaction processing and resource usage, so you can isolate application performance problems
- Details about resource activity and status, so you can look for bottlenecks as they occur
- Database conflicts, class enqueuing, and status of buffer pools, so you can see resource usage changes as they occur
- Realtime warnings when monitored workload volumes exceed safe thresholds
- Realtime warnings when monitored response time does not meet service-level objectives
- Realtime warnings when monitored resources exceed user-defined performance thresholds

For more information about these services, see the *MAINVIEW for IMS Online – Analyzers Reference Manual* and the *MAINVIEW for IMS Online – Monitors and Traces Reference Manual*.

Chapter 2. IPSM Interface

This chapter discusses the IMSPlex System Manager (IPSM) user interface. If you are already familiar with the IPSM interface, you might want to skip this chapter.

The IPSM interface takes advantage of the BMC Software MAINVIEW windows mode technology, which provides

- unique capabilities
- another way of navigating

The MAINVIEW windows mode environment is discussed in detail in the “Working in Windows Mode” section of the *Using MAINVIEW* manual. A brief synopsis of the information is provided in *MAINVIEW Quick Reference.* Users familiar with ISPF will recognize many of the key functions.

Capabilities

With the IPSM user interface, you have additional capabilities for viewing information and performing actions. IPSM displays information in views. With these 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 to see only the information you want to see
- Customize views to
  - Include/exclude any field
  - Rearrange fields or change their width or headings
  - Create your own 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 exercise any of these capabilities by following the procedures described in the *Using MAINVIEW* manual.

Navigation

IPSM groups its views into categories (Workflow views, Transaction Response Time views, and so on). You can get an overview of the different categories by glancing through the contents of this book.

Navigation between views is designed to be “point and shoot”—that is, you can position the cursor on any highlighted field within a view, press the Enter key, and be taken (by hyperlink) to a new view containing related information.

You can start by displaying one of the IPSM Easy Menus—EZIMS for a single system or EZISSI for multiple systems. Position the cursor on any menu item of interest and press Enter. That takes you to a view displaying the information you want.

Within the new view that is displayed, you can hyperlink from any row in the far left information column to an Object Easy Menu, which will provide detailed, in-context information about the object (resource, job, or workload) you selected. (You can refer to Chapter 3, “Getting Started with Menus” on page 17, for a complete description of IPSM Easy Menus and Object Easy Menus.)

A second way to navigate is to type the view name on the command line of any view once you are within the IPSM component.

You can also type VIEWS on any command line to access an alphabetical list of all IPSM views. You can type MAIN on any command line to access a functional list of view categories. From the categories, you can hyperlink to the names of the individual views. In both the MAIN and VIEWS lists, you can hyperlink from the listed view name to the actual view.

Advantage of Hyperlinking

Hyperlinking from one view to another, or from an Object Easy Menu to a related view, has the advantage of keeping a “filter” on the data you are looking at.

For example, if you hyperlink to the Region Occupancy view (IRGOCCR) from the Transaction Class field in the Transaction Queue Status Summary view (ITRSUMR), the IRGOCCR view is filtered to show all regions that process the class you selected.

By contrast, if you navigate to the IRGOCCR view by typing its name on the command line, you see the unfiltered view—showing all regions, not just the regions processing the class of transaction you are interested in.

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 *Using MAINVIEW* manual), you can see more than one view at the same 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 that view.

Key Functions

In the IPSM environment, many key functions are the same as in ISPF. For example, the END, DOWN, UP, LEFT, and RIGHT keys are defined and function in the same way.

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 will be refreshed in all of them.

You can use the Enter key to execute commands once you have entered them in the primary command field or line command column. If you have multiple windows open, a command will be 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 containing summarized data (in a summary view), you will be taken to an “expanded” view displaying all the data that was summarized in the first view. Most summary views provide a hyperlink to “expand,” displaying the data that was summarized. Typically, the “expand” is from the count field.

Online Help

The PF1 key allows you 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.

View Naming Conventions

IPSM views follow a simple naming convention. The first character is usually the letter *I* (for IPSM, the component name). The next several characters are based on the category to which the view belongs (for example, *RGN* for Region views or *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*, it is usually a realtime view. If it does not, it is usually an interval view.

Easy and Fast Menu views (EZIMS, EZISSI, and EZIFAST), although part of the IPSM component, begin with the letters *EZ*. Easy Menus are a MAINVIEW standard to provide entry points.

Selecting a Starting Point

You can select any of the following starting points for viewing information in IPSM:

- Look at the figures in Chapter 1 to get a visual overview.
- Look at the Contents in this book 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 Easy Menus and selecting options from there (see Chapter 3, “Getting Started with Menus” on page 17).

  If IPSM is new to you, try using one of the Easy Menus (EZIMS for single-system information or EZISSI for sysplexes) as a point of departure.

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

  If you are very experienced and already know the views you want to see, you can go directly to the information by typing the view name on the command line.

Chapter 3. Getting Started with Menus

This chapter describes the basic menus that help you access different views and information within IMSPlex System Manager (IPSM).

IPSM runs in the MAINVIEW windows environment. For a full description of how to navigate with menus and views in the MAINVIEW environment, see the *Using MAINVIEW* manual.

To enter MAINVIEW for IMS, begin at the MAINVIEW Selection Menu (shown in the *Using MAINVIEW* manual). Select either of the following options and press Enter:

- PLEX Management

  A list of MAINVIEW products is displayed. Here you can select any active product. Select MVIMS and press Enter. The EZIMS Easy Menu, shown in Figure 5 on page 18, is displayed.

- IMS

  The IMS Solutions menu is displayed. Select the MVIMS option.

  The IMS Primary Option Menu for MVIMS services is displayed. Select the PLEX MONITORS option (Option V). The EZISSI Easy Menu, shown in Figure 6 on page 19, is displayed.

  Note: When you want to view data for an SSI (single system image) context, use the EZISSI Easy Menu.

IMS Easy and Fast Menus

This section describes the IMS Easy and Fast menus. These menus offer easy access to important information. You can select the menu that provides the quickest access to the information you need.

From the east and fast menus, you can select views and other menus, and some menus have pop-up windows with options related to your selection.

- The **.** character indicates a hyperlink to another view or service.
- The **>** character indicates a hyperlink to a pop-up window or another menu.
- The * character indicates a hyperlink that is not available. A hyperlink field could have an asterisk because a product is not installed, because the hyperlink doesn't work in a multiple system context, or because the hyperlink is not available when a pop-up window is open.

Once you become more familiar with IPSM, you can access system performance information using any of the following methods:

- Enter the view name on any IPSM command line.
- Select a group of views by function from the menu displayed after you select the component from the MAINVIEW Selection Menu or from a PlexManager view.
- Hyperlink from related views.

Each method is described in the *Using MAINVIEW* manual.

IMS Easy Menu (EZIMS)

The IMS Easy Menu (EZIMS or EZIMSR), shown in Figure 5, is a good place to start when you want to view system performance information. It provides access to all key IPSM views and menus. Simply select one of the descriptions listed in the different task categories and press Enter. That takes you to the information you want, gathered and displayed in a specific view.

```
22MAR2004 14:12:30 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIMS=============IMSxxx===*========22MAR2004=14:12:30====MVIMS====D====1
                                IMS EASY MENU
                              Timeframe - Interval

       (Change) Target--->  IMSxxx                     Status: INACTIVE
    Performance             +----------------------+    Resources
  . IMS System              |   Place cursor on    |  . Transactions
  . Processing by Class     |    menu item and     |  . Programs
  . Processing by BALG      |     press ENTER      |  . Databases
                            +----------------------+  . Areas

    Activity/Status           Exceptions                Cross Reference
  . Region Occupancy        . Current Delays          . Transactions/Programs
  . Region Activity         . Database Lock Waits     . Programs/Databases
  . Database Activity       . Waiting Regions         . Databases/Transactions
  . IMSplex Connection      . Alarms in Exception     . Databases/Programs
                            > Stopped Resources

    Communications            Transaction Analysis      Tools and Menus
  . Input Messages Queued   . Delay Factors           > Utilities
  . Output Messages Queued  . Components of Response  > IMS Fast Menu
  . Input/Output Status     . Traces                  > IMS Easy Ops Menu
  . Active Users                                      > IMS Easy DBA Menu
  . OTMA                      Monitors                > IMS SSI Menu
  . APPC                    . In Warning              > MVIMS Main Menu
                            . Active                  . Installed Products
                            . Workload Objective      . What's New?
                            . Area Summary            . Return...
```

Figure 5. IMS Easy Menu (EZIMS)

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

- View system performance information (simply select a category of interest)
- Access other MAINVIEW for IMS services
- Select the IMS Fast Menu EZIFAST (shown in Figure 7 on page 20)

To display the IMS Easy Menu:

- Enter the view name (EZIMS or EZIMSR) on any command line within IPSM .
- Enter VIEWS in any IPSM command line, and then select the view name from the resulting list.

IMS Sysplex Easy Menu (EZISSI)

The IMS Sysplex Easy Menu (EZISSI or EZISSIR), shown in Figure 6, provides options for obtaining performance measurement information about all the IMS systems across your sysplex.

```
22MAR2004 14:11:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZISSI============IMSxxx===*========22MAR2004=14:10:47====MVIMS====D====1
                                IMS EASY MENU
                             Timeframe - Interval

   Performance             +----------------------+    Resources
 . IMS Systems in Context  |   Place cursor on    |  . Transactions
 . IMS Msg Sharing Groups  |    menu item and     |  . Programs
 . IMS Data Sharing Group  |     press ENTER      |  . Databases
 . Processing by Class     +----------------------+  . Areas
 . Processing by BALG                                 . IMSplex
                             Exceptions
   Activity                . Current Delays            Cross Reference
 . Region Occupancy        . Database Lock Waits     . Transactions/Programs
 . Region Activity         . Waiting Regions         . Programs/Databases
 . Database Activity       . Alarms in Exception     . Databases/Transactions
                           > Stopped Resources       . Databases/Programs

   Communications            Transaction Analysis      Tools and Menus
 . Input Messages Queued   . Delay Factors           > Utilities
 . Output Messages Queued  . Components of Response  > IMS Easy Menu
 . Input/Output Status     . Traces                  > IMS Easy Ops Menu
 . Active Users                                      > IMS Easy DBA Menu
 . OTMA                      Monitors                > IMS Fast Menu
 . APPC                    . In Warning              > MVIMS Main Menu
                           . Active                  . Installed Products
                           . Workload Objective      . What's New?
                           . Area Summary            . Return...
```

Figure 6. IMS Sysplex Easy Menu (EZISSI)

The EZISSI menu provides access to information gathered during a time interval. For information gathered in realtime, see the EZISSR menu.

Although the options in this menu are specific to the IMS sysplex environment, the menu works just like the other Easy Menus described in this chapter.

To display the EZISSI menu:

- Select Option V (multiple system performance monitoring) from the MAINVIEW Primary Option Menu and press Enter. To view data for a specific target, choose the Select Target/Menu item in the Tools and Menus section of the menu.
- Enter the view name (EZISSI) on any IPSM command line.
- Enter VIEWS on any IPSM command line, and then select the view name (EZISSI) from the resulting list.

IMS Fast Menu (EZIFAST)

The IMS Fast Menu (EZIFAST or EZIFASTR), shown in Figure 7, offers menu item categories that link to more detailed information.

```
22MAR2004 14:13:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIFAST===========IMSxxx===*========22MAR2004=14:13:13====MVIMS====D====1
                                IMS FAST MENU
                              Timeframe - Interval
       (Change) Target--->  IMSxxx                      Status: INACTIVE
   System                  +----------------------+    Database Activity
 . IMS                     |  Place cursor on     |  . Overview
 . Status                  |   menu item and      |  . Databases
 . Log Status              |    press ENTER       |  . Volumes
 . PI Statistics           +----------------------+  . VSAM Buffer Pools
 > System Menu                                       . OSAM Buffer Pools
   Scheduling                Delays                  . Fast Path Buffer Stats
 . Statistics              . Transaction Summary       Resources
 . DMB Utilization         . Database                . Transactions by Status
 . PSB Utilization         . Volume                  . Programs by Status
 . Activity by Class       . Database Lock           . Databases by Status
 . Activity by BALG        . Latch                   . Areas by Status
   Regions                  Components of Response   > Resources Menu
 . Occupancy               . Transaction Summary       Cross Reference
 . All Regions             . Applications            . Transactions/Programs
 . Processing              . DLI                     . Programs/Databases
 . Waiting                 . Scheduling              . Databases/Transactions
   Communications          . DB2                     . Databases/Programs
 . Input Messages            Traces                  > Cross Reference Menu
 . Output Messages         . View Traces               Tools and Menus
 . Input/Output Status     . Manage Traces           > Utilities
 . Active Users              Monitors                > IMS Easy Menu
 . APPC                    . In Warning              > IMS Easy Ops Menu
 . OTMA Summary            . Workload Objective      > IMS Easy DBA Menu
 . OTMA Transactions       . Wait Analysis           . Installed Products
                           . Manage                  . What's New?
                                                     . Return...
```

Figure 7. IMS Fast Menu (EZIFAST)

The EZIFAST menu provides access to information gathered during a time interval. For information gathered in realtime, see the EZIFASTR menu.

To display the IMS Fast Menu:

- Enter the view name (EZIFAST) on any IPSM command line.
- Enter VIEWS on any IPSM command line, and then select the view name from the resulting list.

IMS Operations Menu

The realtime IMS Operations Menu (EZIOPSR), shown in Figure 8, is provided specifically for operations personnel. The menu provides realtime information about IMS resources, IMS resource exceptions, IMS processing exceptions, and current IMS activity. It also provides command capability for IMS resources so that you can issue a command for a single resource across multiple IMS systems. (Command capability requires implementation of MAINVIEW AutoOPERATOR for IMS.)

You can select Current Target 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 Context Members or use the CONtext command.

```
02/05/2001 14:15:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIOPSR===========IMSxxx===*========02/05/2001=14:15:13====MVIMS====D====1
                             IMS OPERATIONS MENU
                             Timeframe - Realtime

 (Change)  Current Target   IMSA                      Status: ACTIVE
           Context Members         1
   Commands                +----------------------+    Current Activity
 . Transactions            |   Place cursor on    |  . IMS Systems in Context
 . Programs                |    menu item and     |  . Region Occupancy
 . Databases               |     press ENTER      |  . Region Activity
 . Users,LTERMs,Nodes      +----------------------+  . Database Activity
 . Regions                                           . Log Stats (Multiple)
                                                     . Active Users
 Resource Exceptions         Processing Exceptions   . OTMA Summary
 . Transaction             . Monitors in Warning     . APPC (Multiple)
 . Program                 . Current Delays
 . Database                . Regions in Lock Wait      Tools and Menus
 . User/LTERM/Node         . Waiting Regions         . View PAS Journal
                           . Alarms in Exception     > AutoOPERATOR for IMS
                           . Input Messages Queued   . Installed Products
                           . Output Messages Queued  > IMS Easy Menu
                                                     > IMS Fast Menu
                                                     > IMS SSI Menu
                                                     > MVIMS Main Menu
```

Figure 8. IMS Operations Menu

To display the IMS Operations Menu:

- Enter the view name (EZIOPSR) on any IPSM command line.
- Enter VIEWS on any IPSM command line, and then select the view name from the resulting list.

IMS DBA Easy Menu

The IMS DBA Easy Menu (EZIDBA or EZIDBAR), shown in Figure 9, 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 realtime.

You can select Current Target 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 Context Members or use the CONtext command.

```
02/05/2001 14:15:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIDBA============IMSxxx===*========02/05/2001=14:15:13====MVIMS====D====1
                               IMS DBA Easy MENU
                             Timeframe - Interval

 (Change)  Current Target   IMS71X                    Status: ACTIVE
           Context Members         1
   Database                +---------------------- +   Delay Analysis
 . All Databases           |   Place cursor on     | . Database Delays
 . Databases in Exception  |    menu item and      | . DB Delays by DB, Prog
 . Databases by Status     |     press ENTER       | . Lock Delays by DB
 . Database Contentions    +---------------------- + . I/O Delays by Vol
 . System DB Activity                                . I/O Delays by Vol, DB
 . Database I/O Activity                             . I/O Delays by DB, Vol
 . Database Call Activity    Transaction Analysis
 . OSAM Buffer Pools       . View Detail Trace
 . VSAM Buffer Pools       . Start Detail Trace
 . Fast Path Buffer Pools
 . DMB Pool Utilization
   Cross Reference           Processing                Tools and Menus
 . DB  -> Transaction      . IMS Systems in Context  . Set to Realtime
 . DB  -> Program          . Active Regions          > IMS Easy Menu
 . Prog-> Database         . Regions in DL/I         > IMS Fast Menu
 . Prog-> DBs in Exception . Regions in Lock Wait    > IMS SSI Menu
 . Tran-> Database         . Regions in I/O Wait     > MVIMS Main Menu
 . Tran-> DBs in Exception . Transaction Delays      . Installed Products
 . Prog-> Tran-> Database  . Logging Statistics      . What's New?
```

Figure 9. IMS Easy DBA Menu

The EZIDBA menu provides access to information gathered during a time interval. For information gathered in realtime, see the EZIDBAR menu.

To display the IMS Easy DBA Menu:

- Enter the view name (EZIDBA or DZIDBAR) on any IPSM command line.
- Enter VIEWS on any IPSM command line, and then select the view name from the resulting list.

IMS Object Easy Menus

This section describes IMS Object Easy Menus. An IMS Object Easy Menu is related to an object (such as a resource, job, or workload) shown in another view. It provides more detailed information about the specific object it is related to.

To display an IMS Object Easy Menu, hyperlink from an object (such as a resource, job, or workload) shown in another view. Generally, you will select an object from the first column in a view and press Enter to hyperlink to the related Object Easy Menu. The menu gives you more detailed information about the object you selected.

Example: Using an Object Easy Menu to Solve a Problem

This section provides an example of how you might use an IMS Object Easy Menu to solve a problem where you suspect region occupancy to be a contributing factor.

You might begin at the IMS Easy Menu, EZIMS (shown in Figure 5 on page 18). First, you select the High Occupancy field in the Regions section of the menu, which takes you to the Region Occupancy view (IRGOCC), shown in Figure 10.

```
22MAR2004  12:29:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                              SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGOCC===========IMSxxx===*========22MAR2004==12:29:41====MVIMS====D====3
CM Reg Region   Rgn Rgn MVS  Proc Rgn Cls %    Cls %    Cls %    Cls %    Other
-- ID  Name     Typ CPU CPU  Rate Occ     Occ      Occ      Occ      Occ  % Occ
     1 IMSM18Y  MPP   2  91   0.4  63   1  63    2   0    3   0    4  0
     3 IMSM18Y  MPP   2  91   0.4  62   1  62    2   0    3   0    4  0
     2 IMSM18Y  MPP   2  91   0.4  62   1  62    2   0    3   0    4  0
```

Figure 10. Sample Region Occupancy View (IRGOCC)

In the IRGOCC view, you can select one of the objects in the Reg ID field to get further information. That takes you to the related IMS Object Easy Menu, shown in Figure 11 on page 24.

```
22MAR2004  12:31:45 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IRGOCC===IRGMO====IMSxxx===*========22MAR2004==12:29:41====MVIMS====D===1
                                  Region Menu
                              Timeframe - Interval

            Region Name ->  IMSM18Y
                     ID ->     1
                 IMS ID ->  Y18H

    Region Information      +----------------------+    Tools and Menus
  . Work Qued for this Rgn  |   Place cursor on    |  > Utilities
  . Region Activity         |    menu item and     |  > MVIMS Main Menu
  . This Region Type        |     press ENTER      |  > IMS Easy Menu
                            +----------------------+  > IMS Fast Menu
    View Criteria                                     . Return...
  . Include BMPs and DBTs
  . Include BMPs
  . Include DBTs
  . Exclude BMPs and DBTs
```

Figure 11. Sample IMS Object Easy Menu (IRGMO)

From this Object Easy Menu you can access the detailed information you need to narrow the scope of your problem. The menu allows you to access

- Region-related information you can view
- Utilities that allow you to change targets or timeframes
- Other MVIMS services that provide more detailed information for the element you selected

For more information about IMS Object Easy Menus and how to access and customize them, see the *Using MAINVIEW* manual.

Part 2. Optimizing System Performance

This section describes how you can use IPSM views to manage your IMS workflow, analyze transaction response, and determine the causes of transaction delays. For general information about views, see the *Using MAINVIEW* manual.

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Chapter 4. Managing IMS Workflow Performance

This chapter shows you how to use IPSM to manage your workflow performance. A visual overview is provided in Figure 12 on page 30, followed by an explanation of how to use the workflow views to answer the following questions:

- Is IMS resource usage too high?
- Are regions available for processing?
- Are any classes being delayed?
- Are BALGs being serviced efficiently?
- Is OS/390 affecting IMS performance?

The second half of this chapter is a reference section ("Views for Workflow Management – Reference Section" on page 46) with a complete listing of IPSM views available to help you manage IMS workflow and transaction processing throughput. Views are grouped by type of information provided:

- IMS activity
- IMS sysplex activity
- Region occupancy
- Class activity
- Transaction processing
- Transaction processing for Fast Path balancing group (BALG)

Each view group contains both summary and detail views. Most views are available in either realtime or interval versions. A sample realtime view from each group is shown and described. (Realtime views show you information from the present time. Interval views show you information gathered over a time period. The time period can be either from current or past time.)

Some views are available in either graphical or textual form. The graphical form displays data in bar graphs to give you a quick visual picture. The textual form provides you with additional numerical information.

Note: SMQ is displayed in the message count field of workload and transaction processing views if the ISQQUERY parameter is set to prevent collection of message count data for IMS systems using shared message queues. The ISQQUERY parameter is located in the BBPARM member IMFBEX00. When the ISQQUERY parameter is set to allow collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, "Controlling Shared Message Queue Data Collection" on page 335.

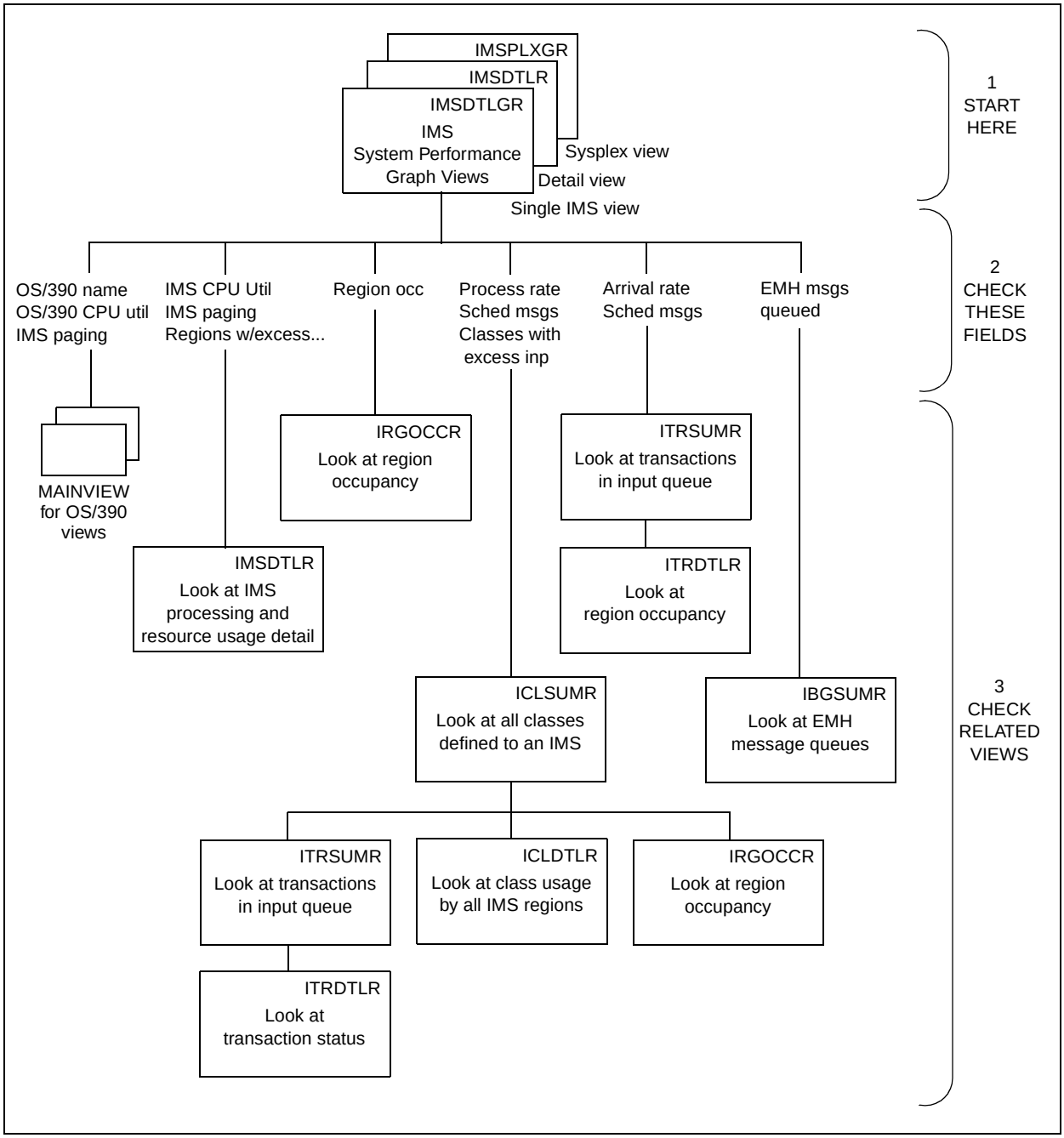

Figure 12. Analyzing IMS Workflow Performance

Using Workflow Views to Analyze Performance

A good starting point for analyzing your IMS workflow performance is either the IMS Activity view (IMSDTLGR) for a single IMS or the IMS Sysplex Activity view (IMSPLXGR) for multiple IMS systems.

Both views are available in either bar graph or textual form. (Certain monitor configurations do not support extended attributes required for viewing the bar graph form.) The bar graph form of the (single) IMS Activity view (IMSDTLGR) is shown in Figure 13.

```
22MAR2002  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                 Regions.....      108
 Msg Shr Grp.       DFSXCFGP             DB Shr Group     NONE
 IMSplex Name       PLX3A1
                    ...25...50...75..100                     ...25...50...75..100
 CPU Util....   10                       Sched Msgs..   3
 Region Occ..   48                       NonSchd Msgs   0
                                         EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                       Classes with      ....5...10...15...20
 BMP Arrival.   20                        Excess Inp.   2
 BMP Process.   20                        Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                        Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                        Excess DLI.   7
 Elapsed Pct.   90                        Excess SQL.  11

 IMS Job Name       IMSxxx               MVS Name....      SJSC
 IMS CPU Util             10             MVS CPU Util        87
 IMS Paging..              3             MVS Paging..        59
```

Figure 13. IMS Activity View (IMSDTLGR) - Bar Graph Form

If your monitor does not support the graphical view, IMSDTLGR will look like the view in Figure 14 on page 32.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....       108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group      NONE
 IMSplex Name       PLX3A1
                    ...25...50...75..100                   ...25...50...75..100
 CPU Util....   10  *                   Sched Msgs..   3
 Region Occ..   48  ********            NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87  ****************
 Process Rate   86  ****************    Classes with      ....5...10...15...20
 BMP Arrival.   20  ***                  Excess Inp.   2  **
 BMP Process.   20  ***                  Excess Elap   4  ****
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5  *****                Excess Occ.   5  *****
                    ...25...50...75..100 Excess CPU.   2  **
 InputQ Pct..   10  *                    Excess DLI.   7  *******
 Elapsed Pct.   90  *****************    Excess SQL.  11  ***********

 IMS Job Name       IMSxxx              MVS Name....      SJSC
 IMS CPU Util             10            MVS CPU Util        87
 IMS Paging..              3            MVS Paging..        59
```

Figure 14. IMS Activity View (IMSDTLGR) - Text Form

To display the IMSDTLGR view, enter IMSDTLGR on the command line, or enter VIEWS and then select IMSDTLGR from the resulting list of views. For more information about the view or any of its fields, select the view name (IMSDTLGR) on the window information line or select any field name and then press your help key.

You can hyperlink from several fields in the IMSDTLGR view to access other views that contain related information. By means of this dynamic view interaction, you can isolate and identify potential problems. The following pages show you how to use these views to answer typical workflow management questions.

Is IMS Resource Usage Too High?

To analyze whether your IMS resource usage is too high, begin by looking at relevant fields within the IMSDTLGR view, and then check the ICLSUMR view (as shown in Figure 15).

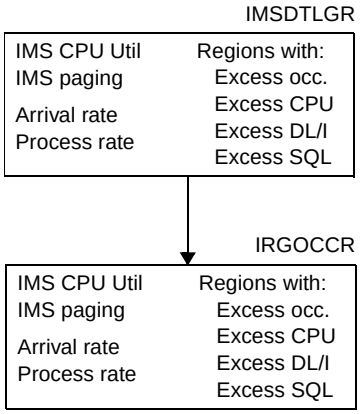

Figure 15. Views for Checking IMS Resource Usage

Begin your analysis of IMS resource usage by looking at the IMS CPU Util, IMS Paging, and Regions with Excess Occ, CPU, DLI, and SQL fields in the IMSDTLGR view. The fields are highlighted in Figure 16.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                 Regions.....      108
 Msg Shr Grp.       DFSXCFGP             DB Shr Group     NONE
 IMSplex Name       IPX3A
                    ...25...50...75..100                   ...25...50...75..100
 CPU Util....   10                       Sched Msgs..   3
 Region Occ..   48                       NonSchd Msgs   0
                                         EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                       Classes with      ....5...10...15...20
 BMP Arrival.   20                        Excess Inp.   2
 BMP Process.   20                        Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                        Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                        Excess DLI.   7
 Elapsed Pct.   90                        Excess SQL.  11

 IMS Job Name       IMSxxx               MVS Name....     SJSC
 IMS CPU Util             10             MVS CPU Util       87
 IMS Paging..              3             MVS Paging..       59
```

Figure 16. Fields for Checking IMS Resource Usage (IMSDTLGR View)

If a value in one of the fields is unusual or above normal, determine if that is due to any of the following reasons:

- A heavier workflow
  (Check the Arrival Rate and Processing Rate fields in the IMSDTLGR view.)
- Application mix
  (See the ICLSUMR view.)
- Changes in the applications themselves

To see more detailed information about the work being performed and the resources being used by an IMS, display the IMS Activity Detail view (IMSDTLR). To display the view, enter IMSDTLR on the command line, or enter VIEWS and then select IMSDTLR from the resulting list of views.

```
22MAR2004  15:58:50 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLR===========IMSxxx===*========22MAR2004==09:07:38====MVIMS====D====1
 IMS Id........      IHA CPU Utilization      Transaction Times.
 IMS Job Name.. IHA332CT  MVS System....   10   Response Time...  0.088
 IMSplex Name.. CSLPLXA9  IMS System....    1   Input Queue Time  0.009
 Msg Shr Group. DFSMVIH1    Control Rgn.    0   Elapsed Time....  0.079
 DB Shr Group..     NONE    DLI SAS Rgn.    0 Transaction Rates.
 MVS Name......     SJSC    TP Rgns.....    0   Arrival Rate....      9
 Regions.......        3    BMP Rgns....    0   Process Rate....     10
 Avg Region Occ       23  DBRC Rgn......    0   BMP Arrival Rate      0
 Occ Threshold.        0  IRLM Rgn......    0   BMP Process Rate      0
                                            Messages..........
                                              Schedulable.....      2
                                              Non-Schedulable.      1
                                              EMH.............      0
                                               BMP.............      0
```

Figure 17. IMS Activity Detail View (IMSDTLR)

IMSDTLR view shows how your critical resources are being used by IMS. For a complete description of what any field shows, position the cursor on the field and press your help key.

Are Regions Available for Processing?

To see if you have regions available for processing, begin by looking at the Region Occ field in the IMSDTLGR view, and then look at the IRGOCCR view. See Figure 18 for a visual overview.

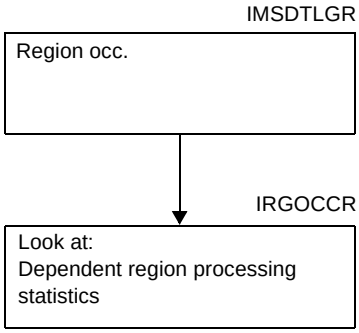

Figure 18. Views for Checking Region Availability

The Region Occ field shows the percentage of time that regions are busy processing or scheduling transactions. A high percentage in the field could mean that some regions are not available to process transactions when they arrive. The Region Occ field in the IMSDTLGR view is highlighted in Figure 19.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR=========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....       108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group      NONE
 IMSplex Name       CSLPLXA9
                    ...25...50...75..100                  ...25...50...75..100
 CPU Util....   10                      Sched Msgs..   3
 Region Occ..   48                      NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                      Classes with      ....5...10...15...20
 BMP Arrival.   20                       Excess Inp.   2
 BMP Process.   20                       Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                       Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                       Excess DLI.   7
 Elapsed Pct.   90                       Excess SQL.  11

 IMS Job Name       IMSxxx              MVS Name....      SJSC
 IMS CPU Util             10            MVS CPU Util        87
 IMS Paging..              3            MVS Paging..        59
```

Figure 19. Field for Checking Region Availability (IMSDTLGR View)

If you find a high percentage in the Region Occ field, hyperlink from that field. This takes you to the Region Occupancy Statistics view (IRGOCCR), where you can see a summary of processing by dependent regions. The IRGOCCR view is shown in Figure 20.

```
22MAR2004  08:40:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGOCCR===========IMSxxx===*========22MAR2004==08:40:33====MVIMS====D====3
CM Reg Region   Rgn Rgn MVS  Proc Rgn Cls %    Cls %    Cls %    Cls %    Other
-- ID  Name     Typ CPU CPU  Rate Occ     Occ      Occ      Occ      Occ  % Occ
     1 IMSM18Y  MPP   2  91   0.4  63   1  63    2   0    3   0    4   0
     3 IMSM18Y  MPP   2  91   0.4  62   1  62    2   0    3   0    4   0
     2 IMSM18Y  MPP   2  91   0.4  62   1  62    2   0    3   0    4   0
```

Figure 20. Region Occupancy Statistics View (IRGOCCR)

The IRGOCCR view shows region and CPU usage. Region utilization is broken down by class. You can use this information to

- Maximize region resource usage and balance workflow processing
- Evaluate the service provided to each class by each region
- Issue line action commands to change class assignments dynamically

To display this view at any time, enter IRGOCCR on the command line or enter VIEWS and then select IRGOCCR from the resulting list of views. For more information about the view or any of its fields, select the view name on the window information line or select any field name and then press your help key.

Are Any Transaction Classes Being Delayed?

To analyze whether any transaction classes are being delayed, you can check to see if there are any excessive input queues for some classes, which transactions are delayed, and why. You can then investigate to see if there are under-utilized regions, which you can use to process this work, or you can start additional regions to do it.

To determine this information, check the IMSDTLGR view, then hyperlink to ICLSUMR and other views for additional information. Figure 21 gives you a visual overview of how to proceed with your analysis.

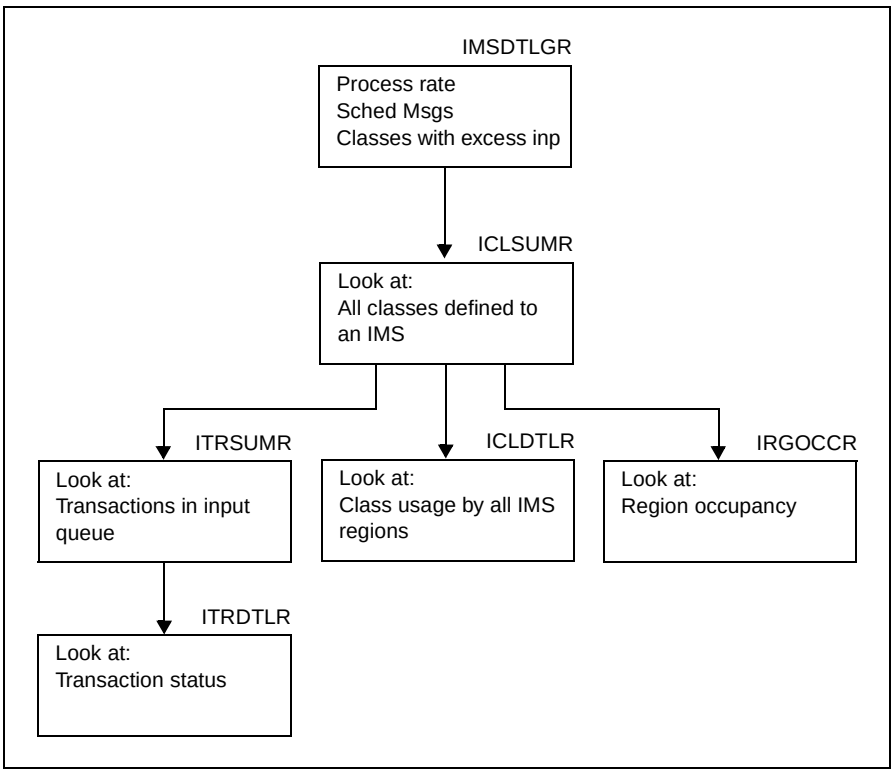

Figure 21. Views for Checking Transaction Class Delays

The first thing you need to do is check the following fields in the IMSDTLGR view:

- Process Rate
- Sched Msgs
- Classes with Excess Inp

The fields are highlighted in Figure 22 on page 38.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                 Regions.....       108
 Msg Shr Grp.       DFSXCFGP             DB Shr Group      NONE
 IMSplex Name       CSLPLXA9
                    ...25...50...75..100                   ...25...50...75..100
 CPU Util....   10                       Sched Msgs..   3
 Region Occ..   48                       NonSchd Msgs   0
                                         EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                       Classes with      ....5...10...15...20
 BMP Arrival.   20                        Excess Inp.   2
 BMP Process.   20                        Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                        Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                        Excess DLI.   7
 Elapsed Pct.   90                        Excess SQL.  11

 IMS Job Name       IMSxxx               MVS Name....      SJSC
 IMS CPU Util             10             MVS CPU Util        87
 IMS Paging..              3             MVS Paging..        59
```

Figure 22. Fields for Checking Transaction Class Delays (IMSDTLGR View)

A high value in any of these fields indicates processing delays somewhere in the system. Classes with Excess Inp highlights the number of classes that have processing delayed beyond a limit established for input queuing.

The second thing you need to do is hyperlink from the Classes with Excess Inp field to the IMS Class Processing view (ICLSUMR), which shows you class usage.

```
22MAR2004  08:41:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                 SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
W1 =ICLSUMR===========IMSxxx===*========22MAR2004==08:41:31====MVIMS====D====3
C Cls IMS   Sched NonSch BMP     Avg     Proc Arriv Queue   Elapsed Rgns Rgns
-     ID    Msgs  Msgs   Msgs    BLog    Rate Rate  Time    Time    Enab Used
    1 X71H   1234     11     0  485.8 +  2.54 12.34 444.000 170.190  123  0.3
    2 X71H     34     21     0    5.2 +  6.32 22.22 254.000  88.087  245  1.5
    3 X71H    234     31     0  151.9 +  1.12 33.42 624.000  23.023  492  0.5
```

Figure 23. IMS Class Processing View (ICLSUMR)

The ICLSUMR view shows all the classes defined to an IMS system and how they are being used by all IMS regions. It shows the

- Number of regions active for each class
- Number of regions used for each class
- Number of regions needed to prevent an increase in schedulable messages in the input queue
- Processing statistics for each class

For more information about this view or any of its fields, position the cursor on the view name on the window information line or on any field name and press your help key.

Hyperlinking for Further Information

As shown in Figure 21 on page 37, you can hyperlink from the ICLSUMR view for further information to help you analyze transaction class delays:

- If you want information about transactions that are queued for a class, hyperlink from the following fields in the ICLSUMR view:
  - Sched Msgs
  - NonSch Msgs

  That will take you to the ITRSUMR view (shown in Figure 27 on page 41). The ITRSUMR view shows you transactions in the input queue.

- If you suspect a delay in throughput for a particular class, hyperlink from the Cls field in the ICLSUMR view:

  That will take you to a menu where you can choose to view the Class Detail view (ICLDTLR). The Class Detail view, shown in Figure 24, shows detailed statistics about class processing.

```
22MAR2004  08:42:16 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =ICLDTLR===========IMSxxx===*========22MAR2004==08:42:16====MVIMS====D====1
 Class..........        1 --Total Msgs---          -Process Stat--
 IMS Id.........     Y18H Back Log.......   485.83 Avg CPU Time...     6.000
 MVS Name.......     SYSD Back Log Dir... Increase Min CPU Time...     4.000
 Total Regions..      912 Queue Size.....     2490 Max CPU TIme...     8.243
 Enabled Regions      246 Diff Tran Cd...       54 Avg Elapse Time    22.000
 Enabled Rgn Occ       96 --Sched Msgs---          Min Elapse Time     8.390
 Region Delay...      222 Queue Size.....     2468 Max Elapse Time     6.003
 Regions Needed.      6.3 Diff Tran Cd...       26 Avg Queue Time.     3.000
 Regions Used...      1.1 -Non-Sched Msg-          Min Queue Time.     1.007
 Proc Rate......      5.8 Queue Size.....       22 Max Queue Time.     1.026
 Arrival Rate...      0.5 Diff Tran Cd...       28 Arrival Rate...    24.682
                          -BMP Msgs......
                          Queue Size.....       24
                          Diff Tran Cd...       30
```

Figure 24. Class Detail View (ICLDTLR)

You can also access the Class Detail view at any time by entering ICLDTLR *classid* on the command line (where *classid* is the class you want to view).

For more information about the view or any of its fields, select the view name on the window information line or any field name and press your help key.

- If you need to see details about the regions processing each class, hyperlink from the Enabled Regions field in the ICLSUMR view. This will take you to the Region Occupancy view (IRGOCCR), shown in Figure 20 on page 36.

- To see the occupancy of regions not enabled for a transaction class, hyperlink from the Regions Needed field in the ICLSUMR view (see Figure 23 on page 38). This will take you to the IRGOCCR view, where you can use actions to reassign the class.

In the IRGOCCR view, you can also

- Hyperlink to see just those regions that are able to process this class
- Look at the occupancy of those regions to see if they are available to process this work
- Look at the class assignments

Which Transactions Are Not Getting Scheduled?

To see if transaction scheduling is performing normally, begin by examining the following fields in the IMSDTLGR view:

- Arrival Rate
- Sched Msgs

Next, proceed to the ITRSUMR and ITRDTLR views, where you can gather more detailed information. An overview of how to proceed is shown in Figure 25.

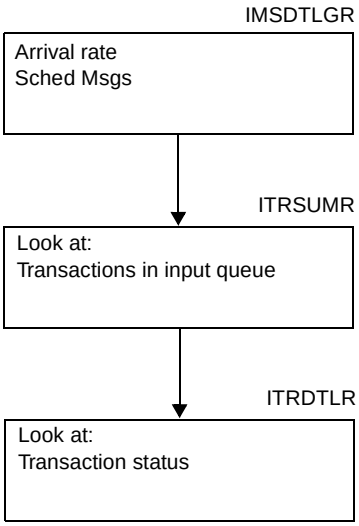

Figure 25. Views for Checking Transaction Scheduling

The fields you need to look at in the IMSDTLGR view are highlighted in Figure 26.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....       108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group      NONE
 IMPlex Name        CLSPLXA9
                    ...25...50...75..100                    ...25...50...75..100
 CPU Util....   10                      Sched Msgs..   3
 Region Occ..   48                      NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                      Classes with      ....5...10...15...20
 BMP Arrival.   20                       Excess Inp.   2
 BMP Process.   20                       Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                       Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                       Excess DLI.   7
 Elapsed Pct.   90                       Excess SQL.  11

 IMS Job Name       IMSxxx              MVS Name....      SJSC
 IMS CPU Util             10            MVS CPU Util        87
 IMS Paging..              3            MVS Paging..        59
```

Figure 26. Fields for Checking Transaction Scheduling (IMSDTLGR View)

The highlighted fields indicate how many messages are arriving per second and how many messages are schedulable. If either or both of these values are not normal for your site, check the status of transactions in the input queue. You can do this by switching to the ITRSUMR view, shown in Figure 27.

To display this view at any time, enter ITRSUMR on the command line or enter VIEWS and then select ITRSUMR from the resulting list of views.

```
22MAR2004  15:51:00 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITRSUMR===========IMSxxx===*========22MAR2004==15:50:59====MVIMS====D====5
CMD Tran     IMS  Status     Num   Bytes  Cls Curr Norm Parallel Proc  Max Rgns
--- Code     ID              Msgs  Queued     Prty Prty Limit    Limit Rgn Schd
    GBGTRNB1 Y18H SMB STOP                4    7    7   65535    65535   0
    GBGTRNB2 Y18H                         4             65535    65535   0
    GBGTRNB3 Y18H                         4             65535    65535   0
    GBGTRNB4 Y18H                         4             65535    65535   0
    GBGTRNF1 Y18H PSB NOTI                0                              0
```

Figure 27. Transaction Queue Status View (ITRSUMR)

For more information about this view or any of its fields, select the view name on the window information line or select any field name and press your help key.

If you suspect that a transaction is not getting scheduled, hyperlink from that transaction in the ITRSUMR view. That will take you to the Transaction Status Detail view (ITRDTLR), shown in Figure 28 on page 42. The ITRDTLR view shows processing statistics and status for the selected transaction. You can use actions to change the scheduling attributes of transactions that are not getting scheduled.

```
22MAR2004  15:53:24 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITRDTLR===========IMSxxx===*========22MAR2004==15:53:23====MVIMS====D====1
    Tran Code....... GBGTRNB1 Status........ SMB STOPPED FOR QUEUEING
    Tran Type....... MPP
    PSB Name........ GBGPSBB1
    IMS Id.......... Y18H     Fast Path..... N
    Messages Queued.        0 Message Type.. NONRESP
    Bytes Queued....        0                SNGLSEG
                              SPA............    0
    Class...........        4 Wait for Input N
    Enabled Regions.        0
    Schedule Rgns...        0
    Priority- Normal        0
              Limit.        0
    Queue Limit.....    65535
    Process Limit...    65535
    Parallel Limit..    65535
    Max Region......        0
```

Figure 28. Transaction Status Detail View (ITRDTLR)

To display the ITRDTLR view, enter ITRDTLR *tranid* on the command line (where *tranid* is the transaction you want to view).

For more information about the view or any of its fields, select the view name on the window information line or select any field name and press your help key.

Are BALGs Being Serviced Efficiently?

To see if Fast Path balancing groups (BALGs) are being serviced efficiently, begin by looking at the EMH Messages field in the IMSDTLGR view, and then look at the IBGSUMR view. See Figure 29 for a visual overview.

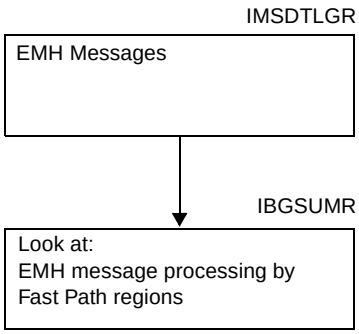

Figure 29. Views for Checking BALG Message Processing

Your starting point for checking BALG processing is the EMH Messages field in the IMSDTLGR view. This field is highlighted in Figure 30 on page 43.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR=========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....      108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group     NONE
 IMSplex Name       CLSPLXA9
                    ...25...50...75..100                  ...25...50...75..100
 CPU Util....   10                      Sched Msgs..   3
 Region Occ..   48                      NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                      Classes with      ....5...10...15...20
 BMP Arrival.   20                       Excess Inp.   2
 BMP Process.   20                       Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                       Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                       Excess DLI.   7
 Elapsed Pct.   90                       Excess SQL.  11

 IMS Job Name       IMSxxx              MVS Name....     SJSC
 IMS CPU Util             10            MVS CPU Util       87
 IMS Paging..              3            MVS Paging..       59
```

Figure 30. Field for Checking BALG Processing (IMSDTLGR View)

If the value shown in the EMH Messages field is high, the number of EMH messages queued is causing a delay in processing for the BALG.

To see how EMH messages are being processed by Fast Path regions, hyperlink from the EMH Messages field in the IMSDTLGR view. That takes you to the EMH Message Processing view (IBGSUMR), shown in Figure 31.

This view can help you determine where a delay in BALG processing is occurring.

```
22MAR2004  16:52:48 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =IBGSUMR===========IMSxxx===*========22MAR2004==16:52:48====MVIMS====D====3
C Program  IMS  EMH   Proc  Arriv Queue   Elapsed Rgns Rgn  Blog
- Name     Id   Msgs  Rate  Rate  Time    Time    Enab HWM  HWM
  BALG0001 Y18H  1234  12.2   2.5  12.000  11.000   13   14   15
  BALG0002 Y18H    34   0.2   6.5  22.000  21.000   23   24   25
  BALG0003 Y18H   234   2.3   1.5  32.000  31.000   33   34   35
```

Figure 31. EMH Message Processing View (IBGSUMR)

You can display the IBGSUMR view at any time by entering IBGSUMR on the command line. For more information about the view or any of its elements, select the view name on the window information line or select any field name and press your help key.

Is OS/390 Affecting IMS Performance?

If you have MAINVIEW for OS/390 installed, you can hyperlink from IMSDTLGR to OS/390 views that show you how OS/390 is affecting IMS performance. See Figure 32 for a visual overview.

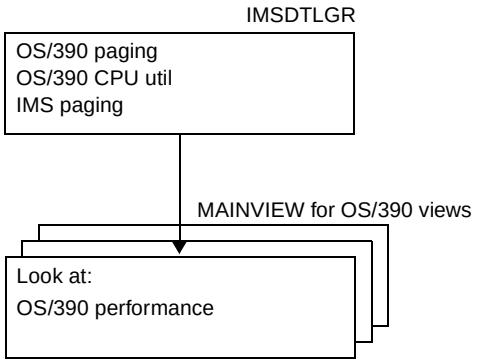

Figure 32. Views for Checking Effect of OS/390 Performance

The following fields in the IMSDTLGR view are your starting points for checking to see if OS/390 is affecting performance:

- MVS Paging

  Shows the number of page-ins and page-outs for the OS/390 where IMS is running.

- MVS CPU Util

  Shows the percentage of CPU used by OS/390.

- IMS Paging

  Shows the number of page-ins and page-outs for that IMS.

These three fields are shown in Figure 33 on page 45.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....       108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group      NONE
 IMSplex Name       CLSPLXA3
                    ...25...50...75..100                   ...25...50...75..100
 CPU Util....   10                      Sched Msgs..   3
 Region Occ..   48                      NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                      Classes with      ....5...10...15...20
 BMP Arrival.   20                       Excess Inp.   2
 BMP Process.   20                       Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                       Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                       Excess DLI.   7
 Elapsed Pct.   90                       Excess SQL.  11

 IMS Job Name       IMSxxx              MVS Name....      SJSC
 IMS CPU Util             10            MVS CPU Util        87
 IMS Paging..              3            MVS Paging..        59
```

Figure 33. Fields for Checking OS/390 Processing

For more information about how to use OS/390 views, see the *MAINVIEW for OS/390 User Guide and Reference*.

Views for Workflow Management – Reference Section

This section lists all the views available to help you manage your IMS workflow. The views are grouped into categories, which are listed in alphabetical order:

- BALGs transaction processing
- Class activity
- IMS activity
- IMS sysplex activity
- Region occupancy
- Transaction processing

Each view category contains several different views. Their basic function is the same, with variations reflecting whether the data displayed is realtime or interval.

You can change the presentation of each view by context, scope, or filters. To see which of these apply to a particular view, refer to the online help. (For online help, position the cursor on the view name on the window information line and press your help key.) In some views you can take actions to make dynamic system changes. These actions are described in the online view help.

To meet your site's needs, you may want to customize views and create screens made up of several views. See the *Using MAINVIEW* manual for a description of how to do this.

In the following pages, each section contains a table showing all views available for that view category. A sample realtime 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.

BALG Views

This section describes the Fast Path balancing group (BALG) views available to help you manage your IMS workflow. These views summarize the processing activity of the message queues for EMH transactions. Transaction processing can be summarized for a single IMS or OS/390, a data sharing group, or across any grouping you choose.

The following table lists all available BALG views. The views are similar except for the time period that samples are taken. (One view displays realtime data; the other view displays data collected during a specific time interval.)

Table 1. BALG Views

View description	Name	Type
EMH message processing	IBGSUMR	Realtime statistics about EMH processing (shown below)
	IBGSUM	Interval statistics

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and then press your help key.
- Enter HELP and the name of the view on the command line.

IBGSUMR View – EMH Message Processing

The view shown below is an example of a realtime BALG view. This view, along with the other view in this group, shows how Fast Path regions are processing EMH messages.

```
22MAR2004  16:52:48 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =IBGSUMR===========IMSxxx===*========22MAR2004==16:52:48====MVIMS====D====3
C Program  IMS  EMH   Proc  Arriv Queue   Elapsed Rgns Rgn  Blog
- Name     Id   Msgs  Rate  Rate  Time    Time    Enab HWM  HWM
  BALG0001 Y18H  1234  12.2   2.5  12.000  11.000   13   14   15
  BALG0002 Y18H    34   0.2   6.5  22.000  21.000   23   24   25
  BALG0003 Y18H   234   2.3   1.5  32.000  31.000   33   34   35
```

Figure 34. IBGSUMR - Sample BALG View

To display this view, enter IBGSUMR in any IPSM command line, or enter VIEWS on any command line and then select the view name from the resulting list of views.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing further, related information.

Class Activity Views

This section describes the class activity views available to help you manage your IMS workflow. These views break down IMS transaction processing into class workloads. Class processing can be summarized for a single IMS or OS/390, a data sharing group, or across any grouping you choose.

The following table lists all available class activity views. The views are similar except for the time period that samples are taken. (Views with names ending in R display realtime data; the other views display data collected during a specific time interval.)

Table 2. Class Activity Views

View description	Name	Type
IMS class processing	ICLSUMR	Realtime summary of statistics about class processing
	ICLSUM	Interval summary of statistics
	ICLSUMGR	Realtime graph
	ICLSUMG	Interval graph
Data sharing group class occupancy	ICLSUMSR	Realtime summary of statistics about data sharing group class occupancy
	ICLSUMS	Interval summary of statistics
	ICLSUGSR	Realtime graph
	ICLSUGS	Interval graph
OS/390 class occupancy	ICLSUMMR	Realtime statistics about OS/390 class occupancy
	ICLSUMM	Interval statistics
	ICLSUGMR	Realtime graph
	ICLSUGM	Interval graph
Class detail activity	ICLDTLR	Realtime detail statistics about activity for a specific class
	ICLDTL	Interval detail statistics

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and press your help key.
- Enter HELP and the name of the view on the command line.

ICLSUMR View – Class Occupancy

The view shown below is an example of a realtime class activity view. This view and the others in this group show all the classes defined to IMS, the level of service they are receiving, how much work is waiting to be processed, and how many processing resources the classes are using.

To see a detailed view of processing information for a specific class, position the cursor on the class number and press Enter.

```
22MAR2004  08:41:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
W1 =ICLSUMR===========IMSxxx===*========22MAR2004==08:41:31====MVIMS====D====3
C Cls IMS   Sched NonSch BMP     Avg     Proc Arriv Queue   Elapsed Rgns Rgns R
-     ID    Msgs  Msgs   Msgs    BLog    Rate Rate  Time    Time    Enab Used N
    1 X71H   1234     11     0  485.8 +  2.54 12.34 444.000 170.190  123  0.3
    2 X71H     34     21     0    5.2 +  6.32 22.22 254.000  88.087  245  1.5
    3 X71H    234     31     0  151.9 +  1.12 33.42 624.000  23.023  492  0.5
```

Figure 35. ICLSUMR - Sample Class Activity View

To display this view, enter ICLSUMR on any IPSM command line or enter VIEWS on any command line and then select the view name from the resulting list of views.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.

IMS Activity Views

This section describes the IMS activity views available to help you manage your IMS workflow. These views provide IMS system information, showing you resource usage and workflow performance for a single IMS.

The following table lists all available IMS activity views. The views are similar except for the time period that samples are taken. (Views with names ending in R display realtime data; the other views display data collected during a specific time interval.)

Table 3. IMS Activity Views

View description	Name	Type
IMS processing and resource usage	IMSDTLGR	Realtime statistics about IMS performance (shown below)
	IMSDTLG	Interval statistics
IMS detail	IMSDTLR	Realtime detail statistics about IMS performance
	IMSDTL	IMS detail

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and press your help key.
- Enter HELP and the name of the view on the command line.

IMSDTLGR View – IMS Processing and Resource Usage

The view shown below is an example of a realtime IMS activity view. This view and the others in this group can help you determine if IMS is meeting its performance objectives. It shows you how critical resources, including application region processing, are being used by IMS.

The Resp Time, Process Rate, Sched Msgs, EMH Messages, and Classes with Excess Inp and Elap fields are all indicators of whether IMS is meeting general throughput and response time objectives.

If IMS is not meeting its objectives, you can check the Arrival Rate field to see if the workflow has increased. You can also check the OS/390 fields for indications of system resource competition.

```
22MAR2004  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR=========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....       108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group      NONE
 IMSplex Name       CLSPLX3A
                    ...25...50...75..100                  ...25...50...75..100
 CPU Util....   10  *                   Sched Msgs..   3
 Region Occ..   48  ********            NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87  ****************
 Process Rate   86  ****************    Classes with      ....5...10...15...20
 BMP Arrival.   20  ***                  Excess Inp.   2  **
 BMP Process.   20  ***                  Excess Elap   4  ****
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5  *****                Excess Occ.   5  *****
                    ...25...50...75..100 Excess CPU.   2  **
 InputQ Pct..   10  *                    Excess DLI.   7  *******
 Elapsed Pct.   90  *****************    Excess SQL.  11  ***********

 IMS Job Name       IMSxxx              MVS Name....      SJSC
 IMS CPU Util             10            MVS CPU Util        87
 IMS Paging..              3            MVS Paging..        59
```

Figure 36. IMSDTLGR - Sample IMS Activity View

To display this view, enter IMSDTLGR on any IPSM command line or enter VIEWS on any command line and then select the view name from the resulting list of views.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.

IMS Sysplex Activity Views

This section describes the IMS sysplex activity views available to help you manage your IMS workflow. These views show how well each IMS in the sysplex is processing its workflow and how much of your resources are being used by each IMS across a sysplex.

The following table lists all available IMS sysplex activity views. The views are similar except for the time period that samples are taken. (Views with names ending in R display realtime data; the other views display data collected during a specific time interval.)

Table 4. IMS Sysplex Activity Views

View description	Name	Type
Sysplex performance by IMS	IMSPLXR	Realtime performance statistics for each IMS in the sysplex
	IMSPLX	Interval statistics
	IMSPLXGR	Realtime graph
	IMSPLXG	Interval graph
Sysplex performance by data sharing group	IMSPLSR	Realtime performance statistics for IMS data sharing groups
	IMSPLS	Interval statistics
	IMSPLSGR	Realtime graph
	IMSPLSG	Interval graph
Sysplex performance by OS/390	IMSPLMR	Realtime performance statistics for IMS system group by OS/390 system
	IMSPLM	Interval statistics
	IMSPLMGR	Realtime graph
	IMSPLMG	Interval graph
Sysplex performance by message sharing group	IMSPLGR	Realtime performance statistics for IMS message sharing groups
	IMSPLG	Interval statistics
	IMSPLGGR	Realtime graph
	IMSPLGG	Interval graph

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and press your help key.
- Enter HELP and the name of the view on the command line.

IMSPLXR View – IMS Sysplex Performance

The view shown below is an example of a realtime IMS sysplex activity view. This view and the others in this group can help you analyze IMS performance across a sysplex. Resource statistics, such as CPU utilization, are aggregated for each IMS. Throughput statistics are for the entire workflow serviced by an IMS. These statistics represent IMS sysplex performance and service levels.

```
22MAR2004  14:28:57 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IMSPLXR===========IMSxxx===*========22MAR2004==14:28:55====MVIMS====D====5
 IMS  IMS      IMS MVS IMS  MVS  Num Sched NonSchd  EMH   BMP    Avg  Avg Occ
 ID   Job Name CPU CPU Page Page Rgn  Msgs    Msgs  Msgs  Msgs   Resp Occ Thrsh
 Y18H IMSAXXA   10  87    1   32  18     4       3     0     0   0.53  48    22
 IMS1 IMS1      11  99    5    2   7     8       0     0     0   3.45  27     2
 IMS2 IMS2       5  76    8    5   5     7       0     0     0   5.67  15    52
 TSTA TESTA    100 100  100  100 999  9999       0     0     0  99.99 100  9999
 TSTB TESTB     78  78   78   78 777  7777       0     0     0  77.77  78  7777
```

Figure 37. IMSPLXR – Sample IMS Sysplex Activity View

```
22MAR2004  14:28:57 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
<W1 =IMSPLXR===========IMSxxx===*========22MAR2004==14:28:55====MVIMS====D====5
 IMS  Occ   MVS      Msg Shr  DB Shr   IMSplex
 ID   Thrsh Name     Group    Group    Name
 Y18H    22 SYSD     IMSAXXA  SYSD     CLSPLXA9
 IMS1     2 SYSA     IMS1     SYSA     CLSPLXBC
 IMS2    52 SYSB     IMS2     SYSB     CLSPLXBC
 TSTA  9999 SYSB     TESTA    SYSB     CLSPLXTS
 TSTB  7777 SYSB     TESTB    SYSB     CLSPLXTS
```

Figure 38. IMSPLXR – Sample IMS Sysplex Activity View, Scrolled Right

To display this view, enter IMSPLXR on any IPSM command line or enter VIEWS on any command line and then select the view name from the resulting list of views.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.

Region Occupancy Views

This section describes the Region Occupancy views available to help you manage your IMS workflow. These views summarize dependent region processing. They show how busy a region is, processing and scheduling transactions, and which workload the region is processing. Regions can be viewed for a single IMS or OS/390, a data sharing group, or across any grouping you choose.

The following table lists all available Region Occupancy views. The views are similar except for the time period that samples are taken. (Views with names ending in R display realtime data; the other views display data collected during a specific time interval.)

Table 5. Region Occupancy Views

View description	Name	Type
Region occupancy	IRGOCCR	Realtime statistics for region occupancy
	IRGOCC	Interval statistics
	IRGOCCGR	Realtime graph
	IRGOCCG	Interval graph
Region processing summary	IRGOVWR	Realtime summary of region processing statistics
	IRGOVW	Interval summary

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and press your help key.
- Enter HELP and the name of the view on the command line.

IRGOCCR View – Region Occupancy

The view shown below is an example of a realtime Region Occupancy view. This view and the others in this group summarize dependent region processing by the region service provided to each class.

```
22MAR2004  08:40:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
 COMMAND  ===>                                                SCROLL ===> HALF
 CURR WIN ===> 1        ALT WIN ===>
 >W1 =IRGOCCR===========IMSxxx===*========22MAR2004==12:29:41====MVIMS====D====3
 CM Reg Region   Rgn Rgn MVS  Proc Rgn Cls %    Cls %    Cls %    Cls %    Other
 -- ID  Name     Typ CPU CPU  Rate Occ     Occ      Occ      Occ      Occ  % Occ
      1 IMSM18Y  MPP   2  91   0.4  63   1  63    2   0    3   0    4  0
      3 IMSM18Y  MPP   2  91   0.4  62   1  62    2   0    3   0    4  0
      2 IMSM18Y  MPP   2  91   0.4  62   1  62    2   0    3   0    4  0
```

Figure 39. IRGOCCR - Sample Region Occupancy View

To display this view, enter IRGOCCR on any IPSM command line or enter VIEWS on any command line and select the view name from the resulting list of views.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.

Transaction Processing Views

This section describes the Transaction Processing views available to help you manage your IMS workflow. These views summarize the processing activity of all the transactions in the input queue. Transaction processing can be summarized for a single IMS or OS/390, a data sharing group, or across any grouping you choose.

The following table lists all available transaction processing views. The views are similar except that one is a summary view and the other is a detail view.

Table 6. Transaction Processing Views

View description	Name	Type
Transaction queue overview	ITRSUMR	Realtime summary of transaction statistics and scheduling parameters
Transaction queue detail	ITRDTLR	Realtime detail
Transaction queue status summary	ITRSTAR	Realtime view of transactions summarized by IMS system, status, and transaction type
Summarized transaction overview	ITRSUMZ	Summarized view of transaction queue information across multiple IMS systems
Transactions with Exceptions	ITREXCP	View of transactions that have an exception status
Transaction Menu	ITRMSR	Object menu (hyperlink from Tran Code field on ITRSUMR)
Transaction Menu	ITRMDR	Object menu (hyperlink from Tran Code field on ITRDTLR)

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and then press your help key.
- Enter HELP and the name of the view on the command line.

ITRSUMR – Transaction Queue Status

The view shown below is an example of a realtime Transaction Processing view. This view, and the ITRDTLR view, show scheduling and parameter status and region statistics for transactions in the input queue.

```
22MAR2004  15:51:00 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITRSUMR===========IMSxxx===*========22MAR2004==15:50:59====MVIMS====D====5
CMD Tran     IMS  Status     Num   Bytes  Cls Curr Norm Parallel Proc  Max Rgns
--- Code     ID              Msgs  Queued     Prty Prty Limit    Limit Rgn Schd
    GBGTRNB1 Y18H SMB STOP                4    7    7   65535    65535   0
    GBGTRNB2 Y18H                         4             65535    65535   0
    GBGTRNB3 Y18H                         4             65535    65535   0
    GBGTRNB4 Y18H                         4             65535    65535   0
    GBGTRNF1 Y18H PSB NOTI                0                              0
```

Figure 40. ITRSUMR - Sample Transaction Processing View

To display this view, enter ITRSUMR on any IPSM command line or enter VIEWS on any command line and then select the view name from the resulting list of views.

If a field name or value is highlighted in the view, you can hyperlink from that field to another view containing more information.

Chapter 5. Controlling Transaction Response Time and Delays

This chapter shows you how to use components of response time (CORT) views to analyze and control transaction response time and delays. A visual overview is given in Figure 41 on page 60. This is followed by a discussion of how to use Transaction Delay Analysis and Transaction Response Analysis views to answer the following questions:

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

IPSM provides response time analysis views about IMS transactions that have completed or are in progress. These views help you identify quickly why transaction response time is not meeting your expectations—so you can improve it.

You can use these views to see

- Processing delays incurred by a transaction when it tries to obtain a resource
- The resource associated with the delay
- IMS processing events occurring as transactions flow through the system (so you can see events that contribute to transaction response time)

IPSM also helps you analyze why a VistaPoint workload is not meeting its objective. It lets you view transaction processing delays and events within a workload

The information in IPSM views is hierarchical. Lower-level views give further, more detailed information related to that shown at a higher level.

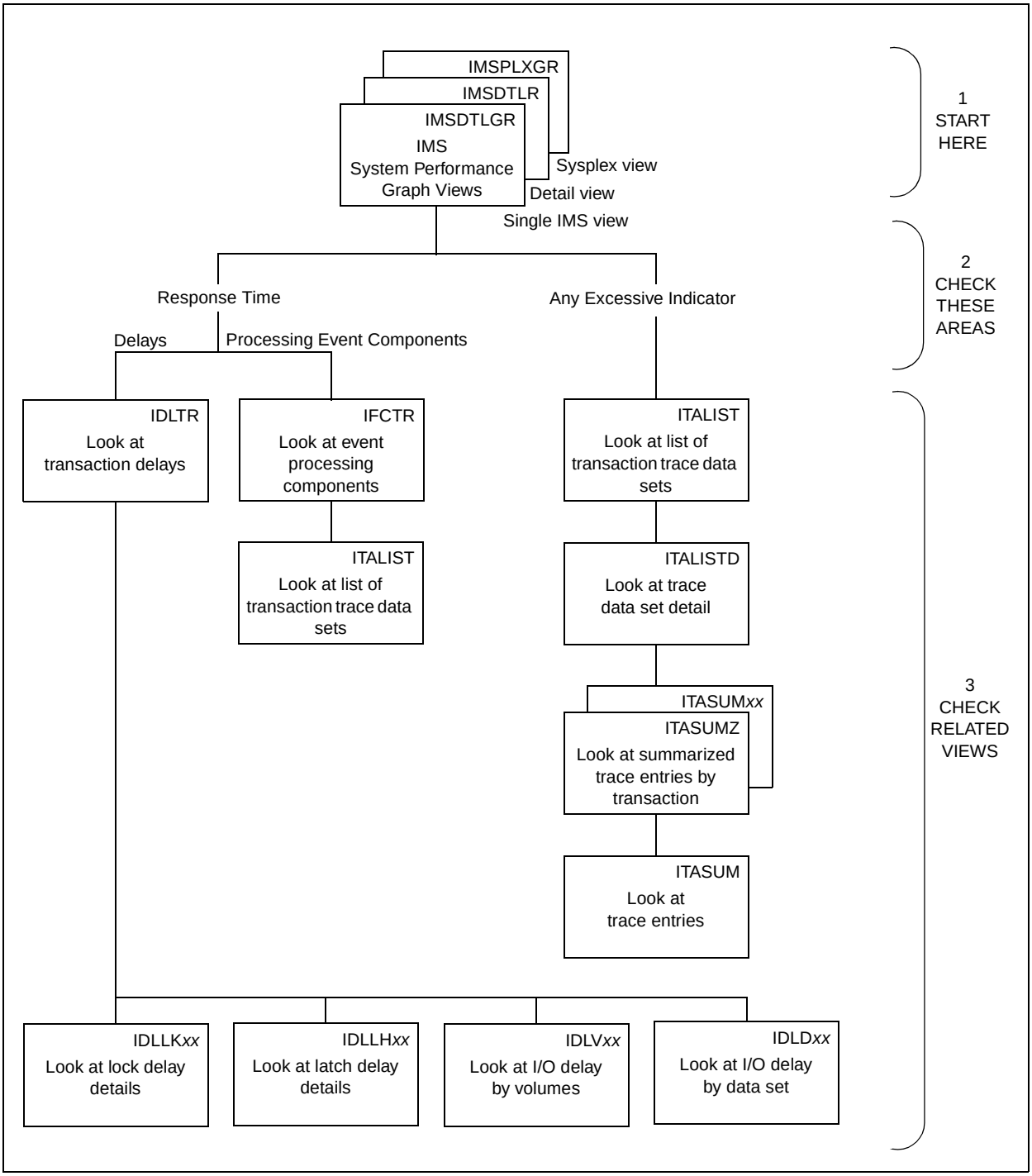

Figure 41. Using IPSM Views to Control IMS Response and Delays

Analyzing Response Time Problems

You can use the IMSDTLGR view to launch an investigation into response time problems. From the IMSDTLGR view, you can hyperlink to other views showing you transaction delays, processing events, or a trace of transaction occurrences (see Figure 41 on page 60).

To investigate slow response time, you might start with the following views:

- IDLTR view - IMS delays by transaction

  This view shows the major causes of delays for all IMS transactions or by workload. It identifies a delay when a transaction is waiting for a resource, and it provides a hyperlink to related views showing more detailed information.

- IFCTR view - IMS processing events by transaction

  This view shows the major transaction flow components that affect response time for all IMS transactions or a workload. From here you can hyperlink to other views to get more information about where transactions are spending their time.

Where Are Delays Occurring?

If Resp Time is high in the IMSDTLGR view, as shown in Figure 42, it could be because a transaction is waiting for a resource.

```
22MAR2002  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR=========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                Regions.....      108
 Msg Shr Grp.       DFSXCFGP            DB Shr Group     NONE
 IMSplex Name       PLX3A1
                    ...25...50...75..100                   ...25...50...75..100
 CPU Util....   10                      Sched Msgs..   3
 Region Occ..   48                      NonSchd Msgs   0
                                        EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                      Classes with      ....5...10...15...20
 BMP Arrival.   20                       Excess Inp.   2
 BMP Process.   20                       Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                       Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                       Excess DLI.   7
 Elapsed Pct.   90                       Excess SQL.  11

 IMS Job Name       IMSxxx              MVS Name....      SJSC
 IMS CPU Util             10            MVS CPU Util        87
 IMS Paging..              3            MVS Paging..        59
```

Figure 42. Response Time Field as an Indicator of Transaction Delays

If Resp Time is high, select this field and hyperlink from it to the IDLTR view. IDLTR shows you the delays contributing to transaction response time. (This path of investigation is shown in Figure 43 on page 62.)

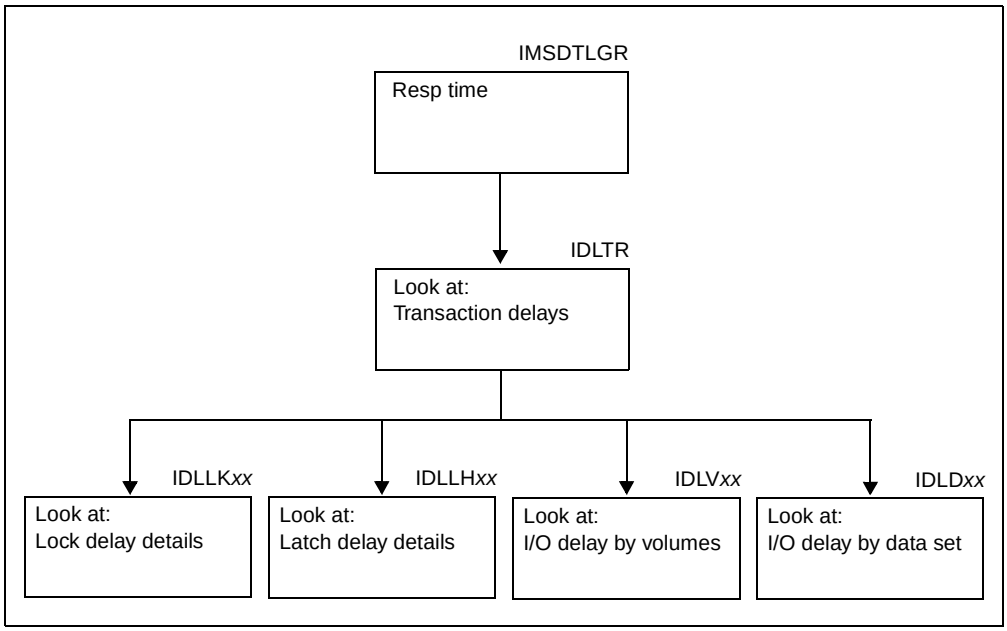

Figure 43. Views for Determining Where Delays Are Occurring

Viewing Transaction Delays

You can use the IDLTR view, shown in Figure 44, to

- Quickly classify whether delays are caused by region availability waits or processing delays
- Identify whether eliminating any of the delay factors would improve response time to the level you want
- Hyperlink to delay details about
  - Locks
  - Latches
  - I/O
  - Pools
  - Other kinds of delays

  to look for possible causes.

```
22MAR2004  16:07:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLTR=============IMSxxx===*========22MAR2004==16:07:08====MVIMS====D====4
CMD Trancode IMS        Avg Resp   %Inp %CPU %CPU %I/O %Lck %Lth %Pol %Oth %DB2
--- -------- ID         0...|....3  Que  Act  Dly  Dly  Dly  Dly  Dly  Dly  Dly
    TDRIVER  Y18H  3.24 *********+   34   26    3    9    5    0    1   22
    THISMINQ Y18H  1.47 *****         8    9    6   25   26    1    0   24
    THDAMINQ Y18H  0.21 **           22    9   39   13         0        28
    THIDMINQ Y18H  0.10 *            46   28   17    3    9    1        21
```

Figure 44. IDLTR View

This view shows all transactions processed. For each transaction processed, you can see how much input queue and elapsed execution time contributed to a transaction's response. If a delay

field is highlighted, you can hyperlink from it to a more detailed view about that delay. For a detailed description of this view, see “IDLTR – Transaction Delays” on page 69.

Which Events Are Contributing to Response Time?

In addition to looking for delays when IMSDTLGR shows a high response time, as described previously, you can also look for transaction processing events that are contributing the most to response time. Proceed from IMSDTLGR to the IFCTR view, as shown in Figure 45.

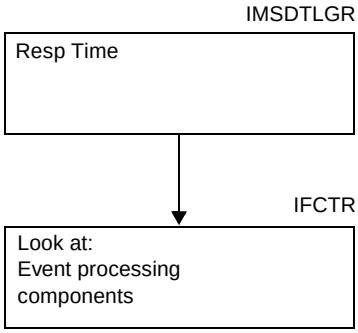

Figure 45. Views for Evaluating Transaction Processing Events

View Transaction Processing Events

To request a view of processing events for all transactions, enter IFCTR on the command line, select it from a list of views with the VIEWS command, or access it from a menu option.

```
22MAR2004  16:07:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR=============IMSxxx===*========22MAR2004==16:07:08====MVIMS====D====5
CMD Trancode IMS  Avg       Avg %InputQ        Avg %Elapse    Avg % Avg % Avg %
--- -------- ID   Resp      0.....50...100     0.....50...100 Appl   DLI   DB2
    TDRIVER  X71H 17.4K                    100 **************    92     8
    THISMINQ X71H  2.13  51 ********        49 *******            1    49
    THDAMUPD X71H  1.31  98 **************   2                    2
    THISMUPD X71H  1.16  89 ************    11 **                 11
    THIDMUPD X71H  1.11  98 **************   2                    2
```

Figure 46. IFCTR View

You can use this view to

- Identify IMS processing events contributing to transaction response time
- Hyperlink from highlighted fields to details about the events that occurred to determine the major contributors to response time

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

For more information about these kinds of views, see “Views for Transaction Delay Analysis” on page 67.

View a List of Completed Transaction Traces

You can view a list of completed transaction traces for

- A transaction displayed in the IFCTR view
- Any abnormal indicator displayed in the IMSDTLGR view, as shown in Figure 47

```
22MAR2002  14:13:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMSDTLGR==========IMSxxx===*========22MAR2004==14:13:32====MVIMS====D====1
 IMS Id......       Y19H                 Regions.....      108
 Msg Shr Grp.       DFSXCFGP             DB Shr Group     NONE
 IMSplex Name       PLX3A1
                    ...25...50...75..100                    ...25...50...75..100
 CPU Util....   10                       Sched Msgs..   3
 Region Occ..   48                       NonSchd Msgs   0
                                         EMH Messages   0
                    ...25...50...75..100 BMP Messages   2
 Arrival Rate   87
 Process Rate   86                       Classes with      ....5...10...15...20
 BMP Arrival.   20                        Excess Inp.   2
 BMP Process.   20                        Excess Elap   4
                    ....|....1....|....2 Regions with      ....5...10...15...20
 Resp Time...  0.5                        Excess Occ.   5
                    ...25...50...75..100  Excess CPU.   2
 InputQ Pct..   10                        Excess DLI.   7
 Elapsed Pct.   90                        Excess SQL.  11

 IMS Job Name       IMSxxx               MVS Name....      SJSC
 IMS CPU Util             10             MVS CPU Util        87
 IMS Paging..              3             MVS Paging..        59
```

Figure 47. Checking All IMSDTLGR Fields for Any Abnormal Indicator

You can also view a list of completed transaction traces recorded in historical trace log data sets. You can do this by accessing the ITALIST view from either the IFCTR or the IMSDTLGR view. These two alternative paths for arriving at the ITALIST view are shown in Figure 48 on page 65.

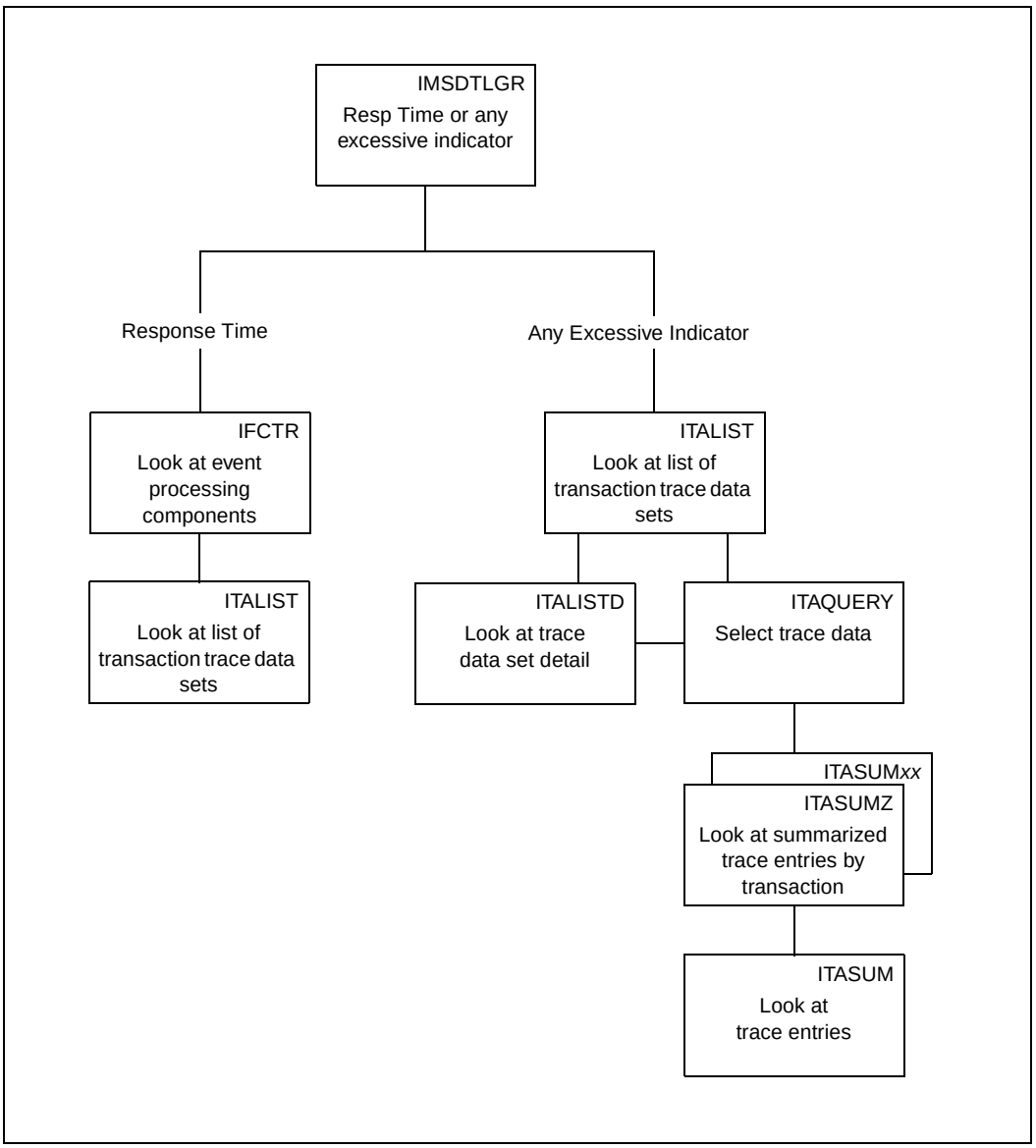

Figure 48. Views for Checking Completed Transaction Traces

ITALIST is also available as a menu option in the IMS Easy Menu (EZIMS). ITALIST is shown below.

```
22MAR2004  07:39:52 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITALIST===========IMSxxx===*========22MAR2004==07:39:52====MVIMS====D====4
 Trace         Data                    Start     Start End        End   Target
 Id       Type Type  Trace Title      Date      Time  Date       Time  Jobname
 DETAIL   Det  Curr  DETAIL TRACE     22MAR2004 05:03 -Active-         I8A332CT
 TRANHIST Sum  Curr  TRANSHIST TRACE  22MAR2004 05:03 -Active-         I8A332CT
 TRANHIST Sum  Hist  TRANSHIST TRACE  22MAR2002 05:10 -Active-         I8A332CT
 ABR3     Abr  Hist  ABBREV TRACE     16MAR2004 11:49 16MAR2004  11:51 IMSxxx
 ABR3     Abr  Hist  ABBREV TRACE     16MAR2004 12:07 16MAR2004  12:09 IMSMAINT
 TEST     Sum  Hist  WORKLOAD TRACE   14MAR2004 07:16 14MAR2004  07:20 IMSxxx
 DETHST   Det  Hist  DETAIL TRACE     14MAR2004 06:28 14MAR2004  06:30 I8A332CT
```

Figure 49. ITALIST View

You can use the ITALIST view to analyze transaction performance. You can use it 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 with hyperlinks for examining trace data set details, viewing a summary of all occurrences of a selected transaction, accessing services where you can manage active and history traces, and executing trace query requests.

For more information about tracing transactions, see Chapter 6, “Examining a User Application” on page 105.

Views for Transaction Delay Analysis

This section lists all the views available to help you manage transaction elapsed time. The views are grouped into the following categories:

- Transaction Delays
- Database I/O Delays
- Data set I/O Delays
- Volume I/O Delays
- Lock Delays
- Latch Delays

Measured data is displayed by these views in textual and/or graphical form. Scrolling right displays more data for that view. You can restrict view presentation by context, scope, or filters. (To see which of these applies for a view, select the view name on the window information line inside the view and press your help key.)

To analyze transaction delays, start your analysis with the IDLTR view. This view shows all transactions and allows you to see the delays that contributed to each transaction's response time. If a transaction shows an unusual response time, select the transaction and hyperlink from it to an Easy Menu. The Easy Menu will provide you with the following view options:

- Transaction delays (see Table 7 on page 68)
- Database I/O delays by transaction, PSB, IMS, volume, or data set (see Table 8 on page 75)
- Data set I/O delays by transaction, PSB, IMS, or volume (see Table 9 on page 79)
- Volume I/O delays by transaction, PSB, or IMS (see Table 10 on page 83)
- Pool delays (see page 74)
- Lock delays by transaction, PSB, IMS, or data set (see Table 11 on page 87)
- Latch delays by transaction, PSB, or IMS (see Table 12 on page 90)
- Other kinds of delays (see page 73)

As described in the *Using MAINVIEW* manual, you can customize views and create screens that include several views to meet your site's needs.

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

Transaction Delays

Table 7 lists all the views available for transaction delays. Descriptions of each view follow on the referenced pages.

Table 7. Transaction Delay Views

View	Name
Major transaction delays	IDLTR (see page 69)
I/O delays	IDLTRIO (see page 70)
Latch delays	IDLTRLH (see page 71)
Lock delays	IDLTRLK (see page 72)
Other kinds of delays	IDLTROT (see page 73)
Pool delays	IDLTRPL (see page 74)

IDLTR – Transaction Delays

```
22MAR2004  16:07:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLTR=============IMSxxx===*========22MAR2004==16:07:08====MVIMS====D====4
CMD Trancode IMS        Avg Resp   %Inp %CPU %CPU %I/O %Lck %Lth %Pol %Oth %DB2
--- -------- ID         0...|....3  Que  Act  Dly  Dly  Dly  Dly  Dly  Dly  Dly
    TDRIVER  Y18H  3.24 *********+   34   26    3    9    5    0    1   22
    THISMINQ Y18H  1.47 *****         8    9    6   25   26    1    0   24
    THDAMINQ Y18H  0.21 **           22    9   39   13         0        28
    THIDMINQ Y18H  0.10 *            46   28   17    3    9    1        21
```

Figure 50. IDLTR View

You can access this view by

- Hyperlinking from the IMSDTLGR Resp Time field
- Entering IDLTR on the command line
- Selecting the name from a list of views with the VIEWS command

A highlighted field label indicates you can select the field to hyperlink to a more detailed view.

Average response time is broken down into percentages of response time that the transaction spent in the input queue and in execution. This allows you to quickly determine whether there is a problem and whether it is occurring in workflow (%Inp Que) or in a processing event (%Elap). The other columns break down the delays that occurred. A high percentage shown by any of these indicates where a potential problem could exist. For example, if the I/O delay percentage is high, the transaction may be waiting for a device. Hyperlinking from %I/O Dly provides a more detailed view of I/O delays to help you determine potential causes.

Hyperlinking from a field in the first column of the IDLTR view displays a menu. This menu serves as a platform to obtain more detailed information about the delays contributing to response time for the scheduled transaction.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLTRIO – I/O Delays by Transaction

```
22MAR2004  09:49:47 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>U1 =IDLTR====IDLTRIO==IMSxxx===*========22MAR2004==09:49:47====MVIMS====D====1
CWD Trancode IMS ID Avg   %         % I/O Dly    %DB  %PSB %DMB %Int %AIO %F/L
--- -------- ------ Resp- Elap-     0....25...50 Dly- Dly- Dly- Dly- Dly- Dly-
    THDAMINQ Y18H    0.21   78   13 ***           13
```

Figure 51. IDLTRIO View

You can access this view to see I/O event contributors to transaction elapsed time by hyperlinking from a

- %I/O Dly field in the IDLTR view of transaction delays
- Transaction code in the Trancode column of the IDLTR view of transaction delays, and then selecting the I/O delays option from a menu

This view shows, for each transaction processed, what percentage of elapsed time an I/O event contributed to a transaction's response. It 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

Hyperlinking from %DB Dly provides more details about database delays. Hyperlinking from a field in the first column of the IDLTRIO view displays a menu. This menu serves as a platform to obtain more detailed information about the delays contributing to response time.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLTRLH – Latch Delays by Latch

```
22MAR2004  11:35:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLTR====IDLTRLH==IMSxxx===*========22MAR2004==11:35:12====MVIMS====D====1
CMD Trancode IMS      Latch ID     Avg % Dly      Min  Max  Confidence PSBName
--- -------- ID       --------     0.....5.....10 %Dly %Dly Level      --------
    THIDMINQ X18H     <Misc..>   1 *                1    1 None       PHIDMINQ
```

Figure 52. IDLTRLH View

You can access this view by hyperlinking from the

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

This view shows the transactions being delayed by latch waits and the effect each latch has on response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about latch delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLTRLK – Lock Delays by Transaction

```
22MAR2004  14:53:48 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLTR====IDLTRLK==IMSxxx===*========22MAR2004==14:53:46====MVIMS====D====1
CMD Trancode IMSID Database DCB RBA/Type   Avg % Dly      Min  Max  Confidence
--- -------- ----- Name---- --- --------   0.....10....20 %Dly %Dly Level
    THIDMINQ Y18H  CUSTINDX   1        1 9 ******            9    9 None
```

Figure 53. IDLTRLK View

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

This view shows the transactions being delayed by lock waits and the effect each resource has on response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about lock delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLTROT – Other Delays by Transaction

```
22MAR2004  10:43:28 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLTR====IDLTROT==IMSxxx===*========22MAR2004==10:43:27====MVIMS====D====1
CMD Trancode IMS ID Avg   %         % Other Dly  DBIn Misc DynA IRLM DBRC DB2
--- -------- ------ Resp- Elap      0....25...50 Dly- Dly  Dly- Dly- Dly- Dly
    THIDMINQ X18H    0.10   54   21 ****                14
```

Figure 54. IDLTROT View

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

The IDLTROT view identifies any delays that occurred for

- Database intent, allocation, open, and recovery control
- IRLM
- Command execution
- AO requests
- Fast path
- Log buffer
- DB2

Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about transaction delays and response.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLTRPL – Pool Delays by Transaction

```
22MAR2004  09:51:24 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLTR====IDLTRPL==IMSxxx===*========22MAR2004==09:51:24====MVIMS====D====1
CMD Trancode IMS ID   Avg   %         % Pool Dly      %DBW %DMB %PSB %PSB %FPC
--- -------- -------- Resp- Elap      0.....25.....50 Dly- Dly- Dly- EDly Dly-
    THIDMINQ Y18H      0.10   54
```

Figure 55. IDLTRPL View

You can access this view by hyperlinking from the %Pool Dly field in the IDLTR view of transaction delays to see what pool delays contributed to elapsed time.

This view shows, for each transaction processed, what percentage of elapsed time a storage wait for a pool contributed to a transaction's response. It identifies any delays that occurred for the following pool storage:

- DBWP
- DMBP
- PSB
- Extended private area of a PSB pool
- FPCB

Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about pool delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Database I/O Delays

The table below lists all the views available for database I/O delays. Descriptions of each view follow on the referenced pages.

Table 8. Database I/O Delay Views

View	Name
I/O delays by database	IDLDB (below)
Database I/O delays by class	IDLDBC (see page 76)
Database I/O delays by data set	IDLDBD (see page 76)
Database I/O delays by IMS	IDLDBI (see page 77)
Database I/O delays by PSB	IDLDBP (see page 77)
Database I/O delays by transaction	IDLDBTR (see page 78)
Database I/O delays by volume	IDLDBV (see page 78)

IDLDB – I/O Delays by Database

```
22MAR2004  09:20:18 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDB=============IMSxxx===*========22MAR2004==09:20:18====MVIMS====D====2
CMD DB Name      %I/O Dly     Min  Max  VolSer Workload  Confidence
--- --------     0....15...30 %Dly %Dly ------ --------  Level
    CUSTHDAM   5 **              3    7 BAB326 ALL_IMS  None
    <Misc..>   1                 0    2 <Misc. ALL_IMS  None
```

Figure 56. IDLDB View

This view shows the databases causing I/O delays and their impact on response time. If the I/O delay percentage is high for a database, you can hyperlink from it to a menu. This menu allows you to choose more detailed delay views to help you determine the cause and impact of database I/O delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDBC – Database I/O Delays by Class

```
22MAR2004  09:28:17 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDBC============IMSxxx===*========22MAR2004==09:28:16====MVIMS====D====4
CMD DB Name  Cls     %I/O Dly     Min  Max  VolSer Confidence
--- -------- ---     0....15...30 %Dly %Dly ------ Level
    <Misc..>   1   2 *               2    2 <Misc. None
    <Misc..>   2   1                 0    1 <Misc. None
    CUSTHDAM   1   7 ***             7    7 BAB326 None
    CUSTHDAM   2   3 *               3    3 BAB326 None
```

Figure 57. IDLDBC View

This view shows the databases causing I/O delays and the impact on the classes using them. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about database I/O delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDBD – Database I/O Delays by Data Set

```
22MAR2004  09:38:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDBD============IMSxxx===*========22MAR2004==09:38:37====MVIMS====D====2
CMD DB Name  DD Name       %I/O Dly     Min % Max % VolSer Confidence
--- -------- --------      0....15...30 Dly-- Dly-- ------ Level
    <Misc..> <Misc..>    1                 0     2 <Misc. None
    CUSTHDAM CUSTHDAM    5 **              3     7 BAB326 None
```

Figure 58. IDLDBD View

This view breaks down the database I/O delays by the data sets used. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about database I/O delays.

Note: For Fast Path, the DD Name field shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDBI – Database I/O Delays by IMS

```
22MAR2004  09:32:19 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDBI============IMSxxx===*========22MAR2004==09:32:18====MVIMS====D====2
CMD DB Name  IMS ID       %I/O Dly     Min  Max  VolSer Confidence
--- -------- --------     0....15...30 %Dly %Dly ------ Level
    <Misc..> X18H       1                 0    2 <Misc. None
    CUSTHDAM X18H       5 **              3    7 BAB326 None
```

Figure 59. IDLDBI View

This view shows the databases causing I/O delays and the impact on the IMS using that database. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about database I/O delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDBP – Database I/O Delays by PSB

```
22MAR2004  09:22:04 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDBP============IMSxxx===*========22MAR2004==09:22:04====MVIMS====D====5
CMD DB Name  PSBName      %I/O Dly     Min  Max  VolSer Confidence
--- -------- --------     0....15...30 %Dly %Dly ------ Level
    <Misc..> PHIDMUPD   1                 1    1 <Misc. None
    <Misc..> PHISMINQ   2 *               2    2 <Misc. None
    <Misc..> PHISMUPD   0                 0    0 <Misc. None
    CUSTHDAM PHDAMINQ   7 ***             7    7 BAB326 None
    CUSTHDAM PHDAMUPD   3 *               3    3 BAB326 None
```

Figure 60. IDLDBP View

This view shows the databases causing I/O delays and the impact on the PSBs using them. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to obtain more detailed information about database I/O delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDBTR – Database I/O Delays by Transaction

```
22MAR2004  09:53:03 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDBTR===========IMSxxx===*========22MAR2004==09:53:02====MVIMS====D====5
CMD DB Name  Trancode     %I/O Dly     Min  Max  PSBName  Cls VolSer Confidence
--- -------- --------     0....15...30 %Dly %Dly -------- --- ------ Level
    <Misc..> THIDMUPD   1                1    1 PHIDMUPD   2 <Misc. None
    <Misc..> THISMINQ   2 *              2    2 PHISMINQ   1 <Misc. None
    <Misc..> THISMUPD   0                0    0 PHISMUPD   2 <Misc. None
    CUSTHDAM THDAMINQ   7 ***            7    7 PHDAMINQ   1 BAB326 None
    CUSTHDAM THDAMUPD   3 *              3    3 PHDAMUPD   2 BAB326 None
```

Figure 61. IDLDBTR View

This view shows the databases causing I/O delays and the impact on each transaction using them. Hyperlinking from a field in the first column of the IDLDBTR view displays a menu. You can use this menu to obtain more detailed information about database I/O delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDBV – Database I/O Delays by Volume

```
22MAR2004  09:37:39 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDDC===IDLDBV===IMSxxx===*========22MAR2004==09:37:39====MVIMS====D====1
CMD DB Name  VolSer     %I/O Dly     Min  Max  Confidence
--- -------- ------     0....15...30 %Dly %Dly Level
    CUSTHDAM BAB326   5 **              3    7 None
```

Figure 62. IDLDBV View

You can access this view by hyperlinking from a VolSer field in the IDLDDC view of data set I/O delays by class. This view breaks down the database I/O delays by the volumes used. You the first column of this view displays a menu. You can use this menu to obtain more detailed information about database I/O delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Data Set I/O Delays

The table below lists all the views available for data set I/O delays. Descriptions of each view follow on the referenced pages.

Table 9. Data Set I/O Delay Views

View	Name
I/O delays by data set	IDLDD (below)
Data set I/O delays by class	IDLDDC (see page 80)
Data set I/O delays by IMS	IDLDDI (see page 80)
Data set I/O delays by PSB	IDLDDP (see page 81)
Data set I/O delays by transaction	IDLDDTR (see page 81)
Data set I/O delays by volume	IDLDDV (see page 82)

IDLDD – I/O Delays by Data Set

```
22MAR2004  09:42:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDD=============IMSxxx===*========22MAR2004==09:42:23====MVIMS====D====2
CMD DD Name      %I/O Dly     Min  Max  VolSer Confidence
--- --------     0....15...30 %Dly %Dly ------ Level
    CUSTHDAM   5 **              3    7 BAB326 None
    <Misc..>   1                 0    2 <Misc. None
```

Figure 63. IDLDD View

This view shows the data sets causing I/O delays and their impact on response time. Hyperlinking from a field in the first column of this view displays a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a long data set I/O delay.

Note: For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDDC – Data Set I/O Delays by Class

```
22MAR2004  09:54:58 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDDC============IMSxxx===*========22MAR2004==09:54:58====MVIMS====D====4
CMD DD Name  Cls     %I/O Dly     Min   Max   VolSer Confidence
--- -------- ---     0....15...30 %Dly  %Dly  ------ Level
    <Misc..>   1   2 **               2     2 <Misc. None
    <Misc..>   2   1                  0     1 <Misc. None
    CUSTHDAM   1   7 ***              7     7 BAB326 None
    CUSTHDAM   2   3 **               3     3 BAB326 None
```

Figure 64. IDLDDC View

This view shows the data sets causing I/O delays and the impact on the classes using them. For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDDI – Data Set I/O Delays by IMS

```
22MAR2004  09:57:24 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDDI============IMSxxx===*========22MAR2004==09:57:10====MVIMS====D====2
CMD DD Name  IMS ID     %I/O Dly     Min  Max  VolSer Confidence
--- -------- ------     0....15...30 %Dly %Dly ------ Level
    <Misc..> X18H     1                0    2 <Misc. None
    CUSTHDAM X18H     5 **             3    7 BAB326 None
```

Figure 65. IDLDDI View

This view shows the data sets causing I/O delays and the impact on the IMS using that data set. For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDDP – Data Set I/O Delays by PSB

```
22MAR2004  09:56:08 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDDP============IMSxxx===*========22MAR2004==09:55:40====MVIMS====D====5
CMD DD Name  PSBName      %I/O Dly     Min  Max  VolSer Confidence
--- -------- --------     0....15...30 %Dly %Dly ------ Level
    <Misc..> PHIDMUPD   1                 1    1 <Misc. None
    <Misc..> PHISMINQ   2 **              2    2 <Misc. None
    <Misc..> PHISMUPD   0                 0    0 <Misc. None
    CUSTHDAM PHDAMINQ   7 ***             7    7 BAB326 None
    CUSTHDAM PHDAMUPD   3 **              3    3 BAB326 None
```

Figure 66. IDLDDP View

This view shows the data sets causing I/O delays and the impact on the PSBs using them. For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDDTR – Data Set I/O Delays by Transaction

```
22MAR2004  09:54:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDDTR===========IMSxxx===*========22MAR2004==09:54:00====MVIMS====D====5
CMD DD Name  Trancode     %I/O Dly     Min  Max  VolSer Confidence
--- -------- --------     0....15...30 %Dly %Dly ------ Level
    <Misc..> THIDMUPD   1                 1    1 <Misc. None
    <Misc..> THISMINQ   2 *               2    2 <Misc. None
    <Misc..> THISMUPD   0                 0    0 <Misc. None
    CUSTHDAM THDAMINQ   7 ***             7    7 BAB326 None
    CUSTHDAM THDAMUPD   3 *               3    3 BAB326 None
```

Figure 67. IDLDDTR View

This view shows the data sets causing I/O delays and the impact on each transaction using them. For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLDDV – Data Set I/O Delays by Volume

```
22MAR2004  09:50:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLDD====IDLDDV===IMSxxx===*========22MAR2004==09:50:23====MVIMS====D====1
CMD DD Name  VolSer     %I/O Dly     Min  Max  Confidence
--- -------- ------     0....15...30 %Dly %Dly Level
    CUSTHDAM BAB326   5 **              3    7 None
```

Figure 68. IDLDDV View

You can access this view by hyperlinking from the VolSer field in the

- IDLDD view of I/O delays by data set
- IDLDDI view of data set I/O delays by IMS
- IDLDDP view of data set I/O delays by PSB
- IDLDDTR view of data set I/O delays by transaction

This view breaks down the data sets causing I/O delays by the volumes used. You can use it to see if a volume is the cause of a data set I/O delay. For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Volume I/O Delays

The table below lists all the views available for volume I/O delays. Descriptions of each view follow on the referenced pages.

Table 10. Volume I/O Delay Views

View	Name
I/O delays by volume	IDLVL (below)
Volume I/O delays by class	IDLVLC (see page 84)
Volume I/O delays by database	IDLVLDB (see page 84)
Volume I/O delays by data set	IDLVLDD (see page 85)
Volume I/O delays by IMS	IDLVLI (see page 85)
Volume I/O delays by PSB	IDLVLP (see page 86)
Volume I/O delays by transaction	IDLVLTR (see page 86)

IDLVL – I/O Delays by Volume

```
22MAR2004  09:51:58 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLVL=============IMSxxx===*========22MAR2004==09:51:58====MVIMS====D====2
CMD VolSer     %I/O Dly     Min  Max  Confidence
--- ------     0....15...30 %Dly %Dly Level
    BAB326   5 **              3    7 None
    <Misc.   1                 0    2 None
```

Figure 69. IDLVL View

This view shows the volumes causing I/O delays and their impact on response time. Hyperlinking from a field in the first column of this view displays a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a volume I/O delay.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLVLC – Volume I/O Delays by Class

```
22MAR2004  09:59:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLVLC============IMSxxx===*========22MAR2004==09:59:22====MVIMS====D====4
CMD VolSer Cls     %I/O Dly     Min  Max  Confidence
--- ------ ---     0....15...30 %Dly %Dly Level
    <Misc.   1   2 *               2    2 None
    <Misc.   2   1                 0    1 None
    BAB326   1   7 ***             7    7 None
    BAB326   2   3 *               3    3 None
```

Figure 70. IDLVLC View

This view shows the volumes causing I/O delays and the impact on the classes using them.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLVLDB – Volume I/O Delays by Database

```
22MAR2004  13:35:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLVLDB===========IMSxxx===*========22MAR2004==11:30:01====MVIMS====D====1
CMD VolSer DB Name     %I/O Dly      Min  Max  Confidence
--- ------ --------    0....15...30  %Dly %Dly Level
    BAB326 CUSTHDAM  7 ***              7    7 Medium
```

Figure 71. IDLVLDB View

This view shows the volumes causing I/O delays and the impact on the databases using them.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLVLDD – Volume I/O Delays by Data Set

```
22MAR2004  18:20:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDLVLDD===========SYSB=====*========22MAR2004==18:20:31====MVIMS====D===5
CMD VolSer DD Name      %I/O Dly     Min  Max  Confidence
--- ------ --------     0....15...30 %Dly %Dly Level
    BAB321 CUSTDD01   8 ***             3   10 High
    BAB321 CUSTDD03   7 ***             7    7 Medium
    BAB322 CUSTDD02   5 **              2    8 High
    BAB322 CUSTDD11   8 ***             8    8 Medium
    BAB323 CUSTDD01   0                 0    0 High
```

Figure 72. IDLVLDD View

This view shows the volumes causing I/O delays and the impact on the data sets they use. You can use it to see if a particular data set is causing the database delay. For Fast Path, DD Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLVLI – Volume I/O Delays by IMS

```
22MAR2004  10:02:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLVLI============IMSxxx===*========22MAR2004==10:02:11====MVIMS====D====2
CMD VolSer IMS ID     %I/O Dly     Min  Max  Confidence
--- ------ ------     0....15...30 %Dly %Dly Level
    <Misc. X18H     1                 0    2 None
    BAB326 X18H     5 **              3    7 None
```

Figure 73. IDLVLI View

This view shows the volumes causing I/O delays and the impact on the IMS using a volume.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLVLP – Volume I/O Delays by PSB

```
22MAR2004  10:00:50 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLVLP============IMSxxx===*========22MAR2004==10:00:48====MVIMS====D====5
CMD VolSer PSBName      %I/O Dly     Min  Max  Confidence
--- ------ --------     0....15...30 %Dly %Dly Level
    <Misc. PHIDMUPD   1                 1    1 None
    <Misc. PHISMINQ   2 *               2    2 None
    <Misc. PHISMUPD   0                 0    0 None
    BAB326 PHDAMINQ   7 ***             7    7 None
    BAB326 PHDAMUPD   3 *               3    3 None
```

Figure 74. IDLVLP View

This view shows the volumes causing I/O delays and the impact on the PSBs using them.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLVLTR – Volume I/O Delays by Transaction

```
22MAR2004  09:53:00 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLVLTR===========IMSxxx===*========22MAR2004==09:53:00====MVIMS====D====5
CMD VolSer Trancode     %I/O Dly     Min  Max  PSBName  Cls Confidence
--- ------ --------     0....15...30 %Dly %Dly -------- --- Level
    <Misc. THIDMUPD   1                 1    1 PHIDMUPD   2 None
    <Misc. THISMINQ   2 *               2    2 PHISMINQ   1 None
    <Misc. THISMUPD   0                 0    0 PHISMUPD   2 None
    BAB326 THDAMINQ   7 ***             7    7 PHDAMINQ   1 None
    BAB326 THDAMUPD   3 *               3    3 PHDAMUPD   2 None
```

Figure 75. IDLVLTR View

This view shows the volumes causing I/O delays and the impact on each transaction using them.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Lock Delays

The table below lists all the views available for lock delays. Descriptions of each view follow on the referenced pages.

Table 11. Lock Delay Views

View	Name
Lock delays	IDLLK (below)
Lock delays by class	IDLLKC (see page 88)
Lock delays by IMS	IDLLKI (see page 88)
Lock delays by PSB	IDLLKP (see page 89)
Lock delays by transaction	IDLLKTR (see page 89)

IDLLK – Lock Delays

```
22MAR2004  09:56:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDLLK=============IMSxxx===*========22MAR2004==09:56:36====MVIMS====D====4
CMD Database DCB RBA/Type     Avg % Dly      Min  Max  Confidence Sharing
--- Name---- --- --------     0.....10....20 %Dly %Dly Level Group
    CUSTHISM   1       12  19 *************    19   19 None
    CUSTHISM   1        E  15 ***********      15   15 None
    CUSTINDX   1        1   9 ******            9    9 None
    <Misc..>                1 *                 1    1 None
```

Figure 76. IDLLK View

This view shows the locks causing transaction delays and their impact on response time. You can hyperlink from a field in the first column to a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a lock delay.

Note: For Fast Path, Database Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLKC – Lock Delays by Class

```
22MAR2004  09:59:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDLLKTR==IDLLKC===IMSxxx===*========22MAR2004==09:59:46====MVIMS====D====4
CMD Database DCB RBA/Type Cls     Avg % Dly      Min  Max  Confidence Sharing
--- Name---- --- -------- ---     0.....10....20 %Dly %Dly Level Group
    CUSTHISM   1        E   1  15 ***********      15   15 None
    CUSTHISM   1       12   1  19 *************    19   19 None
```

Figure 77. IDLLKC View

You can access this view by hyperlinking from a Cls field in the IDLLKTR view of lock delays by transaction. This view shows the locks causing delays and the impact on a class.
For Fast Path, Database Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLKI – Lock Delays by IMS

```
22MAR2004  10:00:29 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLKI===========IMSxxx===*========22MAR2004==10:00:29====MVIMS====D====4
CMD Database DCB RBA/Type IMSID     Avg % Dly      Min  Max  Confidence
--- Name---- --- -------- -----     0.....10....20 %Dly %Dly Level
    <Misc..>              X18H    1 *                1    1 None
    CUSTHISM   1        E X18H   15 ***********      15   15 None
    CUSTHISM   1       12 X18H   19 ************     19   19 None
    CUSTINDX   1        1 X18H    9 ******            9    9 None
```

Figure 78. IDLLKI View

This view shows the locks causing delays and the impact on an IMS. For Fast Path, Database Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLKP – Lock Delays by PSB

```
22MAR2004  09:58:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLKTR==IDLLKP===IMSxxx===*========22MAR2004==09:58:45====MVIMS====D====4
CMD Database DCB RBA/Type PSBName      Avg % Dly      Min  Max  Confidence
--- Name---- --- -------- --------     0.....10....20 %Dly %Dly Level
    CUSTHISM   1        E PHISMINQ  15 ***********      15   15 None
    CUSTHISM   1       19 PHISMINQ  19 ************     19   19 None
```

Figure 79. IDLLKP View

You can access this view by hyperlinking from a PSBName field in the IDLLKTR view of lock delays by transaction. The IDLLKP view shows the locks causing delays and the impact on a PSB. For Fast Path, Database Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLKTR – Lock Delays by Transaction

```
22MAR2004  09:57:44 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLKTR===========IMSxxx===*========22MAR2004==09:57:44====MVIMS====D====4
CMD Database DCB RBA/Type Trancode        Avg % Dly      Min  Max  PSBName  Cls
--- Name---- --- -------- --------        0.....10....20 %Dly %Dly -------- ---
    <Misc..>              THISMINQ      1 *                 1    1 PHISMINQ   1
    CUSTHISM   1        E THISMINQ     15 ***********      15   15 PHISMINQ   1
    CUSTHISM   1       12 THISMINQ     19 ************     19   19 PHISMINQ   1
    CUSTINDX   1        1 THIDMINQ      9 ******            9    9 PHIDMINQ   1
```

Figure 80. IDLLKTR View

This view shows the lock causing delays and the impact on each transaction. For Fast Path, Database Name shows the Fast Path area.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Latch Delays

The table below lists all the views available for latch delays. Descriptions of each view follow on the referenced pages.

Table 12. Latch Delay Views

View	Name
Latch delays	IDLLH (below)
Latch delays by class	IDLLHC (see page 91)
Latch delays by IMS	IDLLHI (see page 91)
Latch delays by PSB	IDLLHP (see page 92)
Latch delays by transaction	IDLLHTR (see page 92)

IDLLH – Latch Delays

```
22MAR2004  10:01:15 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDLLH=============IMSxxx===*========22MAR2004==10:01:15====MVIMS====D====1
CMD Latch        Avg % Dly      Min  Max  Confidence
--- ID------     0.....5.....10 %Dly %Dly Level
    <Misc..>   1 *                 0    2 None
```

Figure 81. IDLLH View

This view shows the latches causing transaction delays and their impact on response time. You can hyperlink from a field in the first column to a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a latch delay.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLHC – Latch Delays by Class

```
22MAR2004  10:03:45 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLHTR==IDLLHC===IMSxxx===*========22MAR2004==10:03:45====MVIMS====D====1
CMD Latch    Cls     Avg % Dly      Min  Max  Confidence
--- ID------ ---     0.....5.....10 %Dly %Dly Level
    <Misc..>   1   1 **                1    2 None
```

Figure 82. IDLLHC View

You can access this view byhyperlinking from a Cls field in the IDLLHTR view of latch delays by transaction. This view shows the latches causing delays and the impact on a class.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLHI – Latch Delays by IMS

```
22MAR2004  10:04:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLHTR==IDLLHI===IMSxxx===*========22MAR2004==10:04:20====MVIMS====D====1
CMD Latch    IMS          Avg % Dly      Min  Max  Confidence
--- ID------ ID------     0.....5.....10 %Dly %Dly Level
    <Misc..> Y18H       1 *                 0    2 None
```

Figure 83. IDLLHI View

You can access this view by hyperlinking from an IMS ID field in the IDLLHTR view of latch delays by transaction. This view shows the latches causing delays and the impact on an IMS.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLHP – Latch Delays by PSB

```
22MAR2004  10:03:16 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLHTR==IDLLHP===IMSxxx===*========22MAR2004==10:03:16====MVIMS====D====1
CMD Latch    PSBName      Avg % Dly      Min  Max  Confidence
--- ID------ --------     0.....5.....10 %Dly %Dly Level
    <Misc..> PHDAMINQ   2 **                2    2 None
```

Figure 84. IDLLHP View

You can access this view by hyperlinking from a PSBName field in the

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

This view shows the latches causing delays and the impact on a PSB.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IDLLHTR – Latch Delays by Transaction

```
22MAR2004 11:32:25 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDLLHTR===========IMSxxx===*========22MAR2004==11:30:54====MVIMS====D====4
CMD Latch    Trancode     Avg % Dly      Min  Max  IMS  PSBName  Cls Confidence
--- ID------ --------     0.....5.....10 %Dly %Dly ID   -------- --- Level
    <Misc..> THDAMINQ   2                  2    2 Y18H PHDAMINQ   1 None
    <Misc..> THDAMUPD   1                  1    1 Y18H PHDAMUPD   2 None
    <Misc..> THIDMINQ   1                  1    1 Y18H PHIDMINQ   1 None
    <Misc..> THISMUPD   0                  0    0 Y18H PHISMUPD   2 None
```

Figure 85. IDLLHTR View

This view shows the latches causing delays and the impact on each transaction.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Views for Transaction Response Analysis

This section lists all the views available to help you identify the transaction processing events contributing to transaction response time. The views are classified into the components of transaction flow through IMS.

Measured data is displayed by these views in textual and/or graphical form. Scrolling right displays more data for that view. You can restrict view presentation by context, scope, or filters. (To see which of these apply to a view, select the view name on the window information line within the view and press your help key.)

To analyze transaction response, start with the IFCTR view. This view allows you to

- View processing events for all transactions
- See the IMS processing events that contributed to each transaction's response time
- Determine where transactions spend their time during IMS processing

Within the IFCTR view, select a transaction you are interested in, and then hyperlink from it to an Object Easy Menu. The Object Easy Menu will provide you with the following view options:

- Transaction processing events
- Workload processing events
- Input queue
- Application
- DL/I
- DL/I calls
- DB2
- Sync point
- ROLS
- Scheduling

As described in the *Using MAINVIEW* manual, you can customize views and create screens comprising several views to meet your site's needs.

IMS Processing Events

The table below lists all the views available for IMS processing events. Descriptions of each view follow on the referenced pages.

Table 13. IMS Processing Event Views

View	Name
Major IMS processing events	IFCTR (see page 95)
DB2	IFCTR2 (see page 96)
Application	IFCTRA (see page 97)
DL/I	IFCTRD (see page 98)
DL/I calls	IFCTRI (see page 99)
Sync point	IFCTRP (see page 100)
Input queue	IFCTRQ (see page 101)
ROLS	IFCTRR (see page 102)
Scheduling	IFCTRS (see page 103)

IFCTR – Processing Events by Transaction

```
22MAR2004  13:58:25 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR=============SYSB=====*========22MAR2004==13:58:24====MVIMS====D====5
CMD Trancode IMS ID Avg   Avg   Avg %InputQ Avg   Avg %Elapse Avg   Avg   Avg
--- -------- ------ Respo Input 0...50..100 Elaps 0...50..100 Appl- DLI-- DB2--
    TRAN0005 IMSA    4.13  2.23 ******       1.90 *****        0.36  1.54
    TRAN0002 IMSA    3.43  1.53 *****        1.90 ******       0.36  1.54
    TRAN0001 IMSA    3.24  1.10 ****         2.15 *******      1.06  1.08  0.01
    TRAN0002 IMSB    2.53  0.57 **           1.97 *********    0.82  0.83  0.02
    TRAN0004 IMSB    1.53  0.27 **           1.27 *********    0.58  0.58  0.01
```

Figure 86. IFCTR View

You can access this view by entering IFCTR on the command line or selecting the name from a list of views with the VIEWS command. A highlighted field label indicates you can select the field to hyperlink to a more detailed view.

Average response time is broken down into percentages of response time the transaction spent in the input queue and in execution. This allows you to quickly determine whether there is a problem and whether it is occurring in workflow (%Inp Que) or in a processing event (%Elap). The other columns break down the events that occurred as IMS processed the transaction. A high percentage shown by any of these indicates where a potential problem could be. 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 this event.

Hyperlinking from a field in the first column of the IFCTR view displays a menu. This menu serves as a platform to obtain more detailed information about the IMS processing events contributing to response time.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTR2 – DB2 by Transaction

```
22MAR2004  10:49:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>w1 =IFCTR====IFCTR2===IMSxxx===*========22MAR2004==10:49:12====MVIMS====D====1
COD Trancode IMS    Avg       Avg % DB2          %CPU %CPU %DB2 Confidence
-U- -------- ID     Resp      0.......15......30  Act  Dly Wait Level
 W  TDRIVER  Y18H   1053.                                       High
 M
```

Figure 87. IFCTR2 View

You can access this view by

- Hyperlinking from the Avg % DB2 field in the IFCTR view of IMS processing events
- Selecting it as a menu option
- Entering its name on the command line

This view shows the average amount of time a transaction spent in DB2 processing. It shows the amount of time spent processing a call or waiting for CPU and its impact on transaction response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRA – Application by Transaction

```
22MAR2004  10:32:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR====IFCTRA===IMSxxx===*========22MAR2004==10:32:01====MVIMS====D====1
CMD Trancode IMS  Avg       Avg % Appl         %CPU %CPU %I/O %F/L %SVC %Oth
--- -------- ID   Resp      0.......25......50  Act  Dly  Dly  Dly  Dly  Dly
    TDRIVER  Y18H 1053.  27 ***********           6    2             16    2
```

Figure 88. IFCTRA View

You can access this view by

- Hyperlinking from the Avg % Appl field in the IFCTR view of IMS processing events
- Selecting it as a menu option
- Entering its name on the command line

This view shows the average amount of time a transaction spent in application processing. It 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 its impact on transaction response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRD – DL/I by Transaction

```
22MAR2004  05:34:07 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1=IFCTR====IFCTRD===IMSxxx===*========22MAR2004==05:34:07====MVIMS====D====1
CMD Trancode IMS  Avg      % Avg DLI          Avg% Avg% Avg% Confidence
--- -------- ID   Resp     0.......25......50 Call ROLS Sync Level
    TDRIVER  Y18H 1053. 73 *****************+   20        53 High
```

Figure 89. IFCTRD View

You can access this view by

- Hyperlinking from the Avg % DLI field in the IFCTR view of IMS processing events
- Selecting it as a menu option
- Entering its name on the command line

This view shows the average amount of time a transaction spent in DL/I execution. It shows where time was spent and its impact on transaction response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRI – DL/I Calls by Transaction

```
22MAR2004  10:46:05 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR====IFCTRI===IMSxxx===*========22MAR2004==10:46:05====MVIMS====D====1
CMD Trancode IMS  Avg       Avg % DLI          %CPU %CPU %I/O %Lck %Lch %Oth
--- -------- ID   Resp      0.......25......50  Act  Dly  Dly  Dly  Dly  Dly
    TDRIVER  Y18H 1053.  20 *******               6    9              0    5
```

Figure 90. IFCTRI View

You can access this view by

- Hyperlinking from the Avg % Call field in the IFCTRD view of DL/I execution events
- Selecting it as a menu option
- Entering its name on the command line

This view shows the average amount of time a transaction spent in DL/I call processing. It shows where time was spent and its impact on transaction response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRP – Sync Point by Transaction

```
22MAR2004  10:50:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR====IFCTRP===IMSxxx===*========22MAR2004==10:50:38====MVIMS====D====1
CMD Trancode IMS  Avg       Avg %Sync          %CPU %CPU %I/O %Lck %Lch %Oth
--- -------- ID   Resp      0.......15......30  Act  Dly  Dly  Dly  Dly  Dly
    TDRIVER  Y18H 1053.  53 *****************+    5    0                  48
```

Figure 91. IFCTRP View

You can access this view by

- Hyperlinking from the Avg% Sync field in the IFCTRD view of DL/I processing events
- Selecting it as a menu option
- Entering its name on the command line

This view shows the average amount of time a transaction spent in sync point processing. It shows where time was spent by the IMS sync point manager in acquiring resources and the impact on transaction response time by that event. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRQ – Input Queue by Transaction

```
22MAR2004  05:29:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR====IFCTRQ===IMSxxx===*========22MAR2004==05:29:31====MVIMS====D====1
CMD Trancode IMS  Avg       Avg %InputQ           Avg %BackOut Avg% Confidence
--- -------- ID   Resp      0......50.....100     0....25...50 Schd Level
    THISMINQ Y18H  0.21  21 ****                0                11 Low
```

Figure 92. IFCTRQ View

You can access this view by

- Hyperlinking from the Avg% InputQ field in the IFCTR view of IMS processing events to see what events contributed to elapsed time
- Hyperlinking to it from a menu option
- Entering its name on the command line

This view shows the average amount of time a message spent in the input queue and its impact on a transaction's response time. Input queue time includes backout time for requeuing a transaction if it did not execute successfully. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRR – ROLS by Transaction

```
22MAR2004  10:52:34 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR====IFCTRR===IMSxxx===*========22MAR2004==10:52:34====MVIMS====D====1
CMD Trancode IMS  Avg       Avg % ROLS         %CPU %CPU %I/O %Lck %Lch %Oth
--- -------- ID   Resp      0.......25......50  Act Dly   Dly  Dly  Dly  Dly
    THISMINQ Y18H  0.87  19 *******                        14    1         4
```

Figure 93. IFCTRR View

You can access this view by

- Hyperlinking from the Avg% ROLS field in the IFCTRD view of DL/I processing events
- Selecting it as a menu option
- Entering its name on the command line

This view shows the average amount of time a transaction spent in ROLS processing. It shows where time was spent and its impact on transaction response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

IFCTRS – Scheduling by Transaction

```
22MAR2004  10:30:10 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFCTR====IFCTRS===IMSxxx===*========22MAR2004==10:30:10====MVIMS====D====1
CMD Trancode IMS  Avg       Avg % Sched        %CPU %CPU %I/O %Pol %Lch %Oth
--- -------- ID   Resp      0.......15......30  Act  Dly  Dly  Dly  Dly  Dly
    THIDMINQ Y18H  0.17   8 ****                  1    6              0    2
```

Figure 94. IFCTRS View

You can access this view by

- Hyperlinking from the Trancode field in the IFCTR view of IMS processing events and selecting it as a menu option
- Hyperlinking to it from the IFCTRQ view
- Entering its name on the command line

This view shows the average amount of time a transaction spent in scheduling. It shows where time was spent by the IMS scheduler in acquiring resources and its impact on transaction response time. Hyperlinking from a field in the first column of this view displays a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For online help, position the cursor on the name of the view or any field, and then press your help key.

Chapter 6. Examining a User Application

This chapter shows you how to use transaction trace views to examine a user application. These views can show you problem trends with a user application, transaction, or program.

These views help you identify the causes of problem trends and solve performance problems detected by

- MAINVIEW VistaPoint
- Transaction response time and delay analysis views
- Your users

The following transaction trace views and menu are provided:

View name	Description
ITALIST	Trace List
ITALISTD	Trace Detail
ITASUM	Trace Summary
ITASUMI	Trace Summary by IMS
ITASUMIP	Trace Summary by IMS by PSB
ITASUMIT	Trace Summary by IMS by Transaction
ITASUMP	Trace Summary by PSB
ITASUMPI	Trace Summary by PSB by IMS
ITASUMZ	Trace Summary by Transaction
ITASUMTI	Trace Summary by Transaction by IMS
ITASUMU	Trace Summary by User
ITASUMUT	Trace Summary by User by Transaction
ITAQUERY	Trace Query
ITALMR	Trace Menu
ITAMS	Trace Menu
ITAMI	Trace Menu
ITAMP	Trace Menu
ITAMT	Trace Menu

Accessing the Transaction Trace Views

You can hyperlink to the transaction trace views from the following Easy Menus:

- IMS Fast Menus Utility popup (EZIFAST and EZIFASTR)
- IMS Sysplex Easy Menus (EZISSI and EZISSIR)
- IMS DBA Easy Menus (EZIDBA and EZIDBAR)

You can also display the views by

- Entering a transaction trace view name on a command line
- Entering VIEWS on the command line and selecting the view from the list of views
- Entering MAIN on the command line, selecting TRACES, and selecting the ITALIST view

The transaction trace menus are not included on the VIEWS list. The menus are accessed by hyperlinks from the trace views.

ITALIST – Trace List View

The Trace List view (ITALIST), shown in Figure 95, provides a list of trace directory entries. The view displays a separate row for each currently active trace buffer, each currently active log data set, and each inactive log data set.

All rows associated with the same trace are displayed together. Each row shows the trace ID and type, the data type, trace title, trace start and end date and time for inactive traces, and the target jobname. 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).

You can scroll right to view additional information, such as the user ID and the trace status.

```
22MAR2004  07:39:52 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITALIST===========IMSxxx===*========22MAR2004==07:39:52====MVIMS====D====4
 Trace         Data                    Start     Start End        End   Target
 Id       Type Type  Trace Title      Date      Time  Date       Time  Jobname
 DETAIL   Det  Curr  WORKLOAD TRACE   22MAR2004 08:03 -Active-         I8A333CT
 TRANHIST Sum  Curr  WORKLOAD TRACE   22MAR2004 08:03 -Active-         I8A333CT
 ABBREV   Abr  Hist  WORKLOAD TRACE   22MAR2004 11:37 -Incmpl-         IMSMAINT
 HISTORY  Det  Hist  WORKLOAD TRACE   16MAR2004 09:08 16MAR2004  09:10 I8A333CT
 HISTORY  Det  Hist  WORKLOAD TRACE   16MAR2004 09:06 16MAR2004  09:09 I8A333CT
 HISTORY  Det  Hist  WORKLOAD TRACE   14MAR2004 09:04 14MAR2004  09:07 I8A333CT
 SUMMARY  Sum  Hist  WORKLOAD TRACE   14MAR2004 11:11 14MAR2004  11:13 I8A333CT
```

Figure 95. ITALIST View

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlinks are provided in the ITALIST view.

Hyperlink from	To see
Trace Id	Trace Menu (ITALMR), which provides hyperlinks for examining trace data set details and for viewing a summary of all occurrences of a selected transaction and where you can access services for managing active and history traces and for executing trace query requests
Start Time	Trace Detail view (ITALISTD), which displays a summarization of the trace records in the selected trace

ITALISTD – Trace Detail View

The Trace Detail view, shown in Figure 96, summarizes the selected trace in fifteen-minute intervals. It provides statistics showing:

- How many trace records were written during the time period
- Averages for response time, elapsed time, input queue time, database calls, and I/O
- Maximums and minimums for response time, elapsed time, and input queue time and shows trace ID and type

You can scroll right to view additional information, such as minimum and maximum response time and input queue time.

You can access the ITALISTD view by hyperlinking to it from the Start Time field in the ITALIST view or by selecting View by Time Period in the ITALMR Trace Menu.

```
22MAR2004  16:53:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITALISTD==========IMSxxx===*========22MAR2004==16:51:45====MVIMS====D====4
  End        Start End   Nbr of    Avg    Avg    Avg    Avg    Avg    Avg Abend
- Date       Time  Time   Trans   Resp   InpQ   Elap   DL/I    I/O    DB2 Count
  22MAR2004  15:15 15:30    949  0.131  0.028  0.103      4      1      0     0
```

Figure 96. ITALISTD View

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlinks are provided in the ITALISTD view.

Hyperlink from	To see
Nbr of Trans	Trace Summary by Transaction view (ITASUMZ), which shows transactions summarized by transaction code
Avg fields	Trace Summary view (ITASUM), which shows transactions that are worse than average
Abend Count	Trace Summary view (ITASUM), which shows only the transactions that abended
Min fields	Trace Summary view (ITASUM), which shows transactions that are better than average
Trace Id, Dataset Id	Trace Query Request view (ITAQUERY), where you can create and execute a query against trace data in a trace data set

ITASUM – Trace Entries

The Trace Entries view (ITASUM), shown in Figure 97, shows specific occurrences of a transaction and includes transaction run details, such as start time, user ID, message switch, and completion code.

You can access the ITASUM view by hyperlinking to it from the Cnt field in the ITASUMZ view.

```
22MAR2004  09:33:19 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITASUMZ==ITASUM===IMSxxx===*========22MAR2004==09:29:36====MVIMS====D====5
            Trn  Respns Elapsd DLI   DLI  DB2   Total  DLI    DB2   End
-- Trancode Type Time   Time   Calls I/O  Calls CPU    CPU    CPU   Time
   THIDMINQ MPP   2.040  1.960     7            0.0064 0.0031 0.000 10:07:02.84
   THIDMINQ MPP   1.240  1.230     7            0.0064 0.0033 0.000 10:07:05.74
   THIDMINQ MPP   1.270  1.250     6            0.0063 0.0053 0.000 10:07:15.47
   THIDMINQ MPP   1.270  1.200     9            0.0166 0.0041 0.000 10:07:23.27
   THIDMINQ MPP   1.380  1.370     9            0.0116 0.0069 0.000 10:07:55.78
```

Figure 97. ITASUM View

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlinks are provided in the ITASUM view.

Hyperlink from	To see
Trancode	Trace Menu (ITAMS), which provides hyperlinks for changing form filters and changing a query filter or time
Trn Type	Summary Trace Data Display (STRAC), which summarizes DC call activity, DL/I call activity, Fast Path activity, DB2 activity, and CPU times for a selected transaction instance

ITAQUERY – Trace Query View

You can use the Trace Query view (ITAQUERY), shown in Figure 98, to create and execute a query against the trace data in a trace data set. Trace data is selected by the trace ID and the data set name ID (or token) in the Traceid,DsnId field. The data retrieved is displayed in the ITASUMZ view.

In the Command field, you must enter either R to RUN your query request or Q to modify the QWHERE clause used by the query. QWHERE allows you to create complex expressions and use other trace filter parameters.

From this view you can specify other trace query parameters for trace ID, data set ID, transaction code, PSB name, and thresholds for response and elapsed time

You can access the ITAQUERY view by hyperlinking to it from the ITALMR Trace Menu, by hyperlinking to it from the Trace Id, Dataset Id field in the ITALISTD view, or by entering the view name on the command line.

```
22MAR2004  16:46:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
 W1 =ITAQUERY==========IMSxxx===*========22MAR2004==16:46:31====MVIMS====D====1
                            Trace Query Request


 Command.......(required)                            R- Run, Q- Edit QWHERE
 Traceid,DsnId (required) ABR3,32

 Time Period............. 21MAY2004 12:09 1I         Update with TIME command
 Workload Name........... *
 Transaction Code........ *
 PSB Name................ *
 Response Time         >= 1.0
 Elasped Time          >= 0.5
```

Figure 98. ITAQUERY View

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

ITASUMZ – Trace Summary by Transaction View

The Trace Summary by Transaction view (ITASUMZ), shown in Figure 99, displays transactions summarized by transaction code, and it provides transaction execution details.

You can hyperlink from the Trancode field to access the Trace Object Menu (ITAMT). From the menu, you can select other trace summary grouping options for further analysis, refine a query request, or select trace data from a different time period.

You can access the ITASUMZ view by requesting a trace query with the ITAQUERY view, by hyperlinking to it from the ITALMR Trace Menu, or by entering the view name on the command line.

```
22MAR2004 14:01:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =ITASUMZ===========IMSxxx===*========22MAR2004==10:45:01====MVIMS====D====3
                Trn  Respns  Input Elapsd DLI   DLI  DB2   Total  DLI    DB2
-- Trancode Cnt Type Time    Queue Time   Calls I/O  Calls CPU    CPU    CPU
   THIDMINQ 100 MPP   0.099  0.099  0.056     6    0       0.0101 0.0054 0.000
   THIDMUPD 100 MPP   0.079  0.079  0.035     2            0.0056 0.0004 0.000
   THISMINQ 100 MPP   0.191  0.191  0.144    10    0       0.0133 0.0077 0.000
```

Figure 99. ITASUMZ View

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlink is provided in the ITASUMZ view.

Hyperlink from	To see
Cnt	Trace Summary view (ITASUM), which shows average transaction occurrences for a given time period

Transaction Trace Easy Object Menus

Five Easy Object menus are provided to filter transaction trace information for a selected object.

The ITALMR menu, shown in Figure 100, 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 access the ITALMR menu by hyperlinking on the Trace Id field in the Trace List view (ITALIST).

```
22MAR2004 14:01:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =ITALIST==ITALMR==(ALL======*=======)22MAR2004==12:23:18====MVIMS====D====1
                                 Trace Menu
                              Timeframe - Realtime

           Trace Id    ->   BPK0757
           Trace Title ->   WORKLOAD TRACE
           Trace Type  ->   Detail
           Data type   ->   History
           Start Date  ->   22MAR2004
           Start Time  ->   10:31
           End Date    ->   22MAR2004
           End Time    ->   10:33
   View/Manage Traces       +----------------------+    Tools and Menus
 . Query Trace              |   Place cursor on    |  > MVIMS Main Menu
 . View By Time Period      |    menu item and     |  > IMS Easy Menu
 . View By Transaction      |     press ENTER      |  > IMS Fast Menu
 . Manage Active Traces     +----------------------+  . Return...
 . Manage History Traces
```

Figure 100. ITALMR Menu

Chapter 7. Monitoring IMS Workloads and Resources

From the IMSPlex System Manager (IPSM) view environment, you can request the Workload Monitor and Resource Monitor services described in the *MAINVIEW for IMS Online – Monitors and Traces Reference Manual*. These services are timer-driven monitors that measure IMS workload and resources over time as requested by a user. Once a monitor is active, you can use the following set of views.

IMON	Shows how many monitors are active for each target and the number that are in a warning condition
ISERV	Lists all active monitors
IMAREAZ	Shows how many monitors are active by IMS area and the number that are in a warning condition for each target
IMWARN	Lists all monitors in a warning condition

To access these views, you can enter the view name on the command line.

Starting with IMON shows you how many monitors are running. From there, you can hyperlink to

- ISERV to see the monitor values

  You can select a monitor displayed by ISERV and hyperlink to a view of a plot produced by that monitor.

- IMAREAZ to see the monitors summarized by target area

  You can hyperlink from here to ISERV, select a monitor, and view a plot from that monitor.

- IMWARN to see only those monitors in warning

  You can select a monitor displayed by IMWARN and hyperlink to a view of a plot produced by that monitor. Easy Menus also provide hyperlinks to these monitor views.

IMON – Target Monitor Summary

```
22MAR2004  12:14:22 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMON============(ALL======*=======)22MAR2004=09:00:01====MVIMS====D====2
CMD Target   Actv     Number in Warn        Avg % Warning  Maximum
--- -------- Mntrs    0.....10....20        0.....50...100 % Warning
    IMSxxx       3  0                  40.5 ******              40.5
    IMSxxx       3  0                  11.4 **                  11.4
```

Figure 101. IMON View

This view summarizes the number of monitors started for each target and shows how many of those monitors are in a warning condition and the warning value. Hyperlinking from an element in the

- Target column or Actv Mntrs column displays the ISERV view
- Number in Warn column displays the IMWARN view

You can access this view by entering its name on the command line or selecting the Monitors Active option from the EZIMS menu.

The other IMON views are

- IMONC – Monitors by Target, Cluster
- IMONR – Monitors by Target, Realtime
- IMONS – Monitors by Target, Session

For more information about a view element, use the cursor to select the element you want and press your help key.

ISERV – Active Monitors

```
22MAR2004  12:20:14 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMON=====ISERV===(ALL======*=======)22MAR2004==09:00:01====MVIMS====D====3
CMD Serv  Parm            % Warning    Curr     Warn     Area Target
--- ----- --------       0.....50...100 Value--- Value--- ---- --------
    @RSTM QUERIES   40.5 ******             0.40     1.00 IWTR IMSxxx
    @RSTM UPDATES   40.5 ******             0.40     1.00 IWTR IMSxxx
    @RSTM ALLWORK   40.5 ******             0.40     1.00 IWTR IMSxxx
```

Figure 102. ISERV View

This view lists the individual monitors by name for each target. Selecting a monitor lets you view a plot of data collected by that monitor.

You can access this view by hyperlinking from Target or Actv Mntrs in the IMON view.

The other ISERV views are

- ISERVC – Monitors Overview, Cluster
- ISERVR – Monitors Overview, Realtime
- ISERVS – Monitors Overview, Session

Selecting an element and pressing your help key provides more information about that element.

IMAREAZ – Target by Area Monitor Summary

```
22MAR2004  12:36:27 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 2        ALT WIN ===>
 W2 =IMAREAZ==========(ALL======*=======)22MAR2004==12:36:27====MVIMS====D====3
CMD                      Number  Number            Average Maximum Number
--- Target   Area     Monitors in Warn 0.......10 Warning Warning Active
    IMSxxx   IWTRN           3       0                                3
    IMSxxx   IWKLD           5       1 *                              5
    IMSxxx   QUEUE           4       0                                4
```

Figure 103. IMAREAZ View

This view summarizes the number of monitors by target area and shows their status. You can hyperlink to the ISERV view from an element in the Area or Number Monitors column to see what the monitors are for the selected target and area. Number in Warn hyperlinks to the IMWARN view for the selected target and area.

You can access this view by entering its name on the command line.

For more information about the view, select an element with the cursor and press your help key.

IMWARN – Monitors in Warning

```
22MAR2004  12:27:45 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IMWARN===========IMSxxx===*========22MAR2004==09:00:01====MVIMS====D====3
CMD Serv  Parm             % Warning    Curr     Warn     Area Target
--- ----- --------       0.....50...100 Value--- Value--- ---- --------
    @RSTM QUERIES  111.4 **************     1.11     1.00 IWTR IMSxxx
    @RSTM UPDATES  131.4 **************     1.31     1.00 IWTR IMSxxx
    @RSTM ALLWORK  108.4 **************     1.08     1.00 IWTR IMSxxx
```

Figure 104. IMWARN View

This view displays only those monitors in a warning condition. It shows how many monitors are in warning and the defined threshold for each target. Selecting a monitor lets you view a plot of data collected by that monitor.

You can access this view by hyperlinking from a Number in Warn element in the IMON view.

Select a view element and use your help key for an online description of that element.

MAINVIEW for IMS Monitors

When you select a monitor from ISERV or IMWARN, a view showing a plot of the data collected by that monitor is displayed, like the one shown below.

```
22MAR2004  13:23:44 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> HALF
CURR WIN ===> 1        ALT WIN ===>
>W1 =IMON=====IINQBG===IMSxxx===*========22MAR2004==13:22:44====MVIMS====D====1
   >>BALGQ   |.....|......|     Count Parm..... FXV1
   12:36:00                        0 Warning..     0.00
   12:35:00                        0 Max/Min..  Maximum
   12:34:00                        0  Value...     0.00
   12:33:00                        0  Time.... 00:00:00
   12:32:00                        0 Graph Max     0.00
   12:31:00                        0 Target... IMSxxx
   12:30:00                        0 Descript. IN-Q LENGTH BY BALG
   12:29:00                        0
   12:28:00                        0 Samples..        0
   12:27:00                        0 Period... 00:10:00
             |.....|......|     Count Samp Int. 00:01:00
   Total                        0.00 Start.... 12:36:00
   Prev Pd                      0.00 Elapsed.. 00:255:0
   Curr Pd                      0.00
```

Figure 105. IINQBG View

Each plot provided by a monitor has a hyperlink to a corresponding MVIMS service that you can use for detail analysis of your target's performance. The hyperlink is indicated by **>>** in the upper left portion of the view. In the preceding example, it is >>BALGQ. This is a hyperlink to the IMS analyzer BALGQ online service. When you make this hyperlink, you have access to all the online services provided by the IMS analyzer and monitor components MVIMS.

The following sections list the monitor plot views for the IMS workload and resource monitor services described in the *MAINVIEW for IMS Online – Monitors and Traces Reference Manual*. The descriptions are in tabular form and categorized by IMS area. Each table shows the plot view and its corresponding monitor and describes the performance data provided.

IMS Workload Monitors

This section describes the views and monitors that provide performance plot displays about IMS:

- DB2 activity
- Fast Path activity
- Global region calls
- Elapsed timing
- Transactions

DB2 Activity

These monitors provide performance data about DB2 calls made through the IMS Attach facility and usage of dependent region CPU time for DB2 requests made by a transaction.

Table 14. IMS Workload Monitors for DB2 Activity

View	Monitor	Description
I#CDB2	#CDB2	Reports the number of SQL calls to DB2 to access data tables for selected workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of SQL calls to DB2 for the total workload or a single workload type.
I#SDB2	#SDB2	Reports the number of nondata-access SQL calls (DDL, dynamic, and control-type calls) to DB2 for selected workloads during the sampling interval. Depending on the parameters specified with the monitor, the reported value is the number of nondata-access SQL calls to DB2 for the total workload or a single workload type.
I@PDB2	@PDB2	Reports the average CPU time used per transaction to process DB2 requests for selected workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the average CPU time used by the total workload or a single workload type.

Fast Path Activity

These monitors provide performance data about IMS Fast Path resource usage.

Table 15. IMS Workload Monitors for Fast Path Activity

View	Monitor	Description.
I#CIC	#CIC	Reports the number of workload Fast Path database control interval contentions (CIC) during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of CICs for the total workload or a single workload type.
I#OBAW	#OBAW	Reports the number of overflow buffer (OBA) latch waits for selected workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of OBA waits by Fast Path transactions or a single workload type.
I@OBA	@OBA	Reports the average overflow buffer usage by Fast Path transactions for selected workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the average overflow buffer usage for the total workload or a single workload type.

Global Region Calls

These monitors provide performance data about all region calls issued during IMS application program processing, including DL/I calls issued by DBCTL regions.

Table 16. IMS Workload Monitors for Global Region Calls

View	Monitor	Description
I$CBMP	$CBMP	Reports the number of calls issued by BMP and JBP regions during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.
I$CDBT	$CDBT	Reports the number of DL/I calls issued by DBCTL threads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.
I$CMPP	$CMPP	Reports the number of calls issued by MPP/JMP and IFP regions during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.
I$CTOT	$CTOT	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.

Elapsed Timing

These monitors provide performance data about transaction elapsed, input, and response time.

Table 17. IMS Workload Monitors for Elapsed Timing

View	Monitor	Description
I@ELAP	@ELAP	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.
I@INPQ	@INPQ	Reports the average MPP/JMP and IFP transaction input queue time for workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the average input queue time for all workloads or for all workloads of a single type.
I@RESP	@RESP	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.

Transactions

This monitor measures how many MPP/JMP or IFP transactions IMS processed.

Table 18. IMS Workload Monitors for Transactions

View	Monitor	Description
I#PROC	#PROC	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

This section describes the views and monitors that provide performance plot displays about IMS:

- MFS
- Input queuing
- Message queuing
- MSC links
- Output queuing
- Scheduling
- Dependent Regions
- Database activity
- Internals
- Interaction with OS/390
- IRLM

IMS MFS

These monitors measure MFS I/O and requests.

Table 19. IMS Resource Monitors for MFS I/O and Requests

View	Monitor	Description
IMFSFD	MFSFD	Reports the percentage of MFS immediate block requests satisfied from pool storage. The percentage is cumulative, based on the total number of immediate block requests minus immediate block reads that occurred in the sampling interval.
IMFSIO	MFSIO	Reports the number of MFS I/O reads during the sampling period. The reported value is the sum of directory reads, prefetch block reads, and immediate block reads.
IMFSIR	MFSIR	Reports the total number of MFS immediate requests during the sampling interval.

Input Queue

These monitors provide performance data about input queue length, including the number of transactions in the input queue and the number available for scheduling.

Table 20. IMS Resource Monitors for the Input Queue

View	Monitor	Description
IINQBG	INQBG	Reports the number of queued input transactions by balancing group (BALG). Depending on the parameters specified with the monitor, the reported value is the total input queue length for all BALGs or the input queue length for one BALG or group of BALGs.
IINQCL	INQCL	Reports the number of queued transactions by class during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total input queue length for all classes or the input queue length for one class.
IINQTR	INQTR	Reports the input queue length by transaction during the sampling interval. Depending on the parameters specified with the monitor, the reported value is the total input queue length or the input queue length for one transaction or group of transactions.
IIQSCL	IQSCL	Reports the number of queued transactions available for scheduling during the sampling period. A queued transaction available for scheduling is not locked, is not stopped, and does not have a priority zero. Depending on the parameters specified with the monitor, the reported value is the total input queue length of all transactions available for scheduling or the input queue length for one processing class.

Message Queue

These monitors provide performance data about the message queue.

Table 21. IMS Resource Monitors for the Message Queue

View	Monitor	Description
ILGMSG	LGMSG	Reports the percentage of the long message queue data set in use during the sampling period. The percentage is calculated as the ratio of allocated records to the total number of records in the long message queue data set.
IQBLKS	QBLKS	Reports the percentage of the QBLKS message queue data set in use during the sampling period. The percentage is calculated as the ratio of allocated records to the total number of records in the QBLKS message queue data set.
IQIO	QIO	Reports the total number of queue I/Os performed during the sampling interval. The number includes both read and write queue I/Os.
IQWAIT	QWAIT	Reports the total number of queuing waits that occurred during a sampling period. Queuing waits include the following: • Waits for an available buffer • Waits for other DECB to read • Waits for other DECB to write • Waits for purge • Waits for buffer ENQ/DEQ
ISHMSG	SHMSG	Reports the percentage of the short message queue data set in use during the sampling period. The percentage is calculated as the ratio of allocated records to the total number of records in the short message queue data set.

MSC Links

These monitors provide performance data about messages received and sent on MSC logical links and the MSC logical link output queue length.

Table 22. IMS Resource Monitors for MSC Links

View	Monitor	Description
IINLK	INLK	Reports the number of messages received on MSC Logical Links during the sampling period. The reported value is the total received for all MSC Logical Links or for a single link depending on the parameters specified with the monitor.
IOQLKS	OQLKS	Reports the output queue length for MSC Logical Links during the sampling period. The reported value is the output queue length for all MSC Logical Links or for one link, depending on the parameters specified with the monitor. It is the difference between the enqueue and dequeue counts for remote transactions and MSNAMES using the MSC Logical Links.
IOUTLK	OUTLK	Reports the number of messages sent on MSC Logical Links during the sampling period. The reported value is the number sent for all MSC Logical Links or for one link depending on the parameters specified with the monitor.

Output Queue

These monitors provide performance data about the number of output messages queued and dequeued by a resource and the number of messages queued to inactive ETO user structures.

Table 23. IMS Resource Monitors for the Output Queue

View	Monitor	Description
IDEADQ	DEADQ	Reports the number of messages queued to inactive ETO user structures. A user structure is considered inactive if it has not been connected to a node for at least as many days as specified in the parameter field. If the parameter field is left blank, the value specified for the IMS dead letter queue time is used.
IOQLN	OQLN	Reports the output queue length by line during the sampling interval. The reported value is total output queue length or the queue length for one line, depending on the parameters specified with the monitor.
IOQLT	OQLT	Reports the output queue length by LTERM during the sampling interval. The reported value is total output queue length or the length for one LTERM or group of LTERMs, depending on the parameters specified with the monitor.
IOQND	OQND	Reports the output queue length by node during the sampling period. The reported value is the total output queue length or the length for one VTAM node or group of nodes, depending on the parameters specified with the monitor.
IOUTLN	OUTLN	Reports message output by line during the sampling interval. The reported value is total output or by one line depending on the parameters specified with the monitor.
OUTLT	OUTLT	Reports message output by LTERM during the sampling interval. The reported value is total output or by one LTERM or group of LTERMs, depending on the parameters specified with the monitor.
IOUTND	OUTND	Reports message output by VTAM node during the sampling period. The reported value is total output or by one VTAM node or group of nodes, depending on the parameters specified with the monitor.

IMS Scheduling

These monitors provide performance data about transaction arrivals and transactions processed.

Table 24. IMS Resource Monitors for Scheduling

View	Monitor	Description
IARVBG	ARVBG	Reports the number of transaction arrivals by balancing group (BALG). Depending on the parameters specified with the monitor, the reported value is the total for all BALGs or the number for one BALG or group of BALGs.
IARVCL	ARVCL	Reports the number of transaction arrivals by processing class 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 processing class.
IARVPR	ARVPR	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 group of programs.
IARVTR	ARVTR	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 group of transactions.
IPRCBG	PRCBG	Reports the number of transactions processed by balancing group (BALG) during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of transactions processed by all BALGs or the number processed by one BALG or group of BALGs.
IPRCCL	PRCCL	Reports the number of transactions processed by class during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total processed or the number processed for one class.
IPRCPR	PRCPR	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 group of programs.
IPRCTR	PRCTR	Reports the number of transactions processed during a sampling interval. 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 group of transactions was processed.
ISCHFL	SCHFL	Reports the number of scheduling failures during the sampling interval. Depending on the parameters specified with the monitor, the reported value is the total number of scheduling failures or the total number of failures of a single type.

IMS Dependent Regions

These monitors provide performance data about DB2 access by programs executing in the dependent regions.

Table 25. IMS Resource Monitors for Dependent Regions

View	Monitor	Description
ID2CON	D2CON	Reports the number of dependent IMS regions connected to DB2 during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of IMS regions connected to DB2 subsystems or the number connected to a specific DB2 subsystem.
ID2SON	D2SON	Reports the number of dependent regions that issued at least one SQL call and are signed on to DB2 during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of regions signed on to DB2 or the regions signed on to a specific DB2 subsystem.
ID2THD	D2THD	Reports the number of dependent regions with active threads to DB2 during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of active regions with DB2 threads or the regions with active threads to a specific DB2 subsystem.

IMS Database

These monitors provide performance data about DL/I buffer pool activity.

Table 26. IMS Resource Monitors for Database Activity

View	Monitor	Description
IDBIO	DBIO	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.
IDBHIT	DBHIT	Reports the hit ratio 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.
IDBSTL	DBSTL	Reports database buffer steal writes for the OSAM pool or by subpool 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.
IHPACC	HPACC	Reports Hiperspace access for all VSAM buffer spools or by subpool 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 by subpool.
IHPHIT	HPHIT	Depending on the parameters specified with the monitor, it reports the hit ratio for all VSAM buffer spools or by subpool during the sampling period.
IHPSTL	HPSTL	Reports Hiperspace buffer steals by VSAM 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 a single subpool.
ISBUSE	SBUSE	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.
IVDBIO	VDBIO	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 one subpool.
IVDBWR	VDBWR	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 one subpool.
IVHIT	VHIT	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 one subpool.

IMS Internals

These monitors provide performance data about IMS internal activity for program isolation, pools, logging, latching, and pool allocation.

Table 27. IMS Internals Resource Monitors (Page 1 of 2)

View	Monitor	Description
ICIOP	CIOP	Reports the percentage of the communications I/O pool in use during the sampling period.
ICWAP	CWAP	Reports the percentage of the communications work area pool in use during the sampling period.
IDBWP	DBWP	Reports the percentage of the database work area pool in use during the sampling period.
IDMBP	DMBP	Reports the percentage of the DMB pool in use during the sampling interval.
IDSAP	DSAP	Reports the percentage of the Dynamic Save Area pool in use during the sampling period.
IEPCB	EPCB	Reports the percentage of the extended PCB (EPCB) pool in use during the sampling period. If Fast Path is not installed in IMS, the IEPCB plot is always zero.
IHIOP	HIOP	Reports the percentage of the high communications I/O pool (HIOP) in use during the sampling period.
ILAWT	LAWT	Reports the average latch wait time in microseconds within the sampling period or since the last IMS checkpoint if a checkpoint occurs within the interval. Depending on the parameters specified with the monitor, the reported value is the average wait time for all latch types or a specific latch type.
IMFSP	MFSP	Reports the percentage of the MFS format pool in use during the sampling period. The usage percentage of the MFS format pool is calculated as the ratio of allocated bytes to the total number of bytes that can be assigned to the pool.
IOBUFW	OBUFW	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.
IOCHKW	OCHKW	Reports the number of check write requests to the IMS logical logger during the sampling period.
IPIENQ	PIENQ	Reports the number of 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 or the number held by one region or group of regions.
IPIPL	PIPL	Reports the percentage of the program isolation (PI) pool in use 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.

Table 27. IMS Internals Resource Monitors (Page 2 of 2)

View	Monitor	Description
IPOOLA	POOLA	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.
IPOOLN	POOLN	Reports the difference in bytes between the total expansion and total compression of blocks allocated to non-CBT fixed storage pools.
IPOOLT	POOLT	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.
IPSBP	PSBP	Reports the percentage of the PSB pool in use during the sampling interval. If the IMS option is ILSO=S, DLISAS PSB pool usage is monitored. If the LSO option is not S, total PSB pool usage is monitored.
IPSBW	PSBW	Reports the percentage of the PSB work area pool in use during the sampling period.
IRECA	RECA	Reports the percentage of the Receive Any (RECA) pool in use during the sampling period.
IWADIO	WADIO	Reports the number of EXCPs to a WADS data set during the sampling interval. If dual WADS logging is in effect, the actual number of EXCPs is twice the reported number.
IWKAP	WKAP	Reports the percentage of the general work area pool in use during the sampling period.

IMS Interaction with OS/390

These monitors provide performance data about OS/390 resources used by IMS interaction with OS/390.

Table 28. IMS Resource Monitors for OS/390

View	Monitor	Description
ICSAUT	CSAUT	Reports the percentage of CSA storage in use during the sampling period.
IDLIO	DLIO	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.
IDPAGE	DPAGE	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.
IECSAU	ECSAU	Reports the percentage of extended CSA storage in use during the sampling period.
IPAGE	PAGE	Reports the number of private, VIO, and swap page-ins and page-outs during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total paging for the system or paging for one IMS region.
ISYSIO	SYSIO	Reports the number of successful EXCPs for data sets allocated to the IMS control region 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 control region or the EXCPs for one data set or group of data sets allocated to IMS.

IRLM

These monitors provide performance data about IRLM activity.

Table 29. IMS Resource Monitors for IRLM

View	Monitor	Description
ILDLCK	LDLCK	Reports the number of IRLM deadlocks that occurred during the sampling period.
ILHELD	LHELD	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.
ILKREQ	LKREQ	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.
ILSUSP	LSUSP	Reports the number of IRLM suspensions that occurred during the sampling period.
ILWNUM	LWNUM	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.
IPTBLK	PTBLK	Reports the number of IRLM lock requests (IRLM 1.5 only) that resulted in a PTB process 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.
IVSEND	VSEND	Reports the number of VTAM sends issued by the IRLM system (IRLM 1.5 only).

Chapter 8. Creating IMS Workload Definitions

This chapter describes how to create and maintain MAINVIEW for IMS (MVIMS) Online workload definitions, which you can use 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 sections and are described in more detail on page 137.

Workload and Composite Names

A workload name and composite name are assigned to each workload. All workloads that share the same composite name are grouped into “applications.” If your site has MAINVIEW VistaPoint installed, you can use a shared composite name to combine the performance of workloads running in IMS, CICS, DB2, and OS/390 into a common application so that you can view the performance of workloads sharing common tasks.

Service-Level Objectives

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.

Monitoring Time Range

Start and end time fields are used to specify a monitoring time period for each workload.

Target ID and System ID

If you want to limit a workload to specific IMS or OS/390 systems, you can include an IMS target ID, an OS/390 system ID, or both.

Workload Resource Fields

Workloads can be qualified by transaction ID, class, program name, PSB name, region job name, region ID, LTERM name, IMS user ID, and transaction type.

Planning 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

Establishing 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 MVIMS 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 MVIMS 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. 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.

Defining 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. MVIMS and MAINVIEW VistaPoint normalize reported values to maintain consistency.

Identifying 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.

Creating 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. Access the IWKLDDEF view and change the view status from browse to edit mode.
2. Open the Add IMS Workload Definition dialog box to add a workload.
3. Assign the workload definition settings in the dialog box.
4. Save and install the workload definition.

Accessing the IWKLDDEF View

The IWKLDDEF view, shown in Figure 106, is the starting point for defining an IMS workload.

```
22MAR2004  16:17:39 ------ MAINVIEW WINDOW INTERFACE(R4.0.01)------------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IWKLDDEF==========I8AM31CT=*========(00 BROWSE        )====MVIMS====D====2
CMD Workload Composite Target   System   Description               Sta Resp %Tr
--- Name---- Name----- -------- -------- ------------              --- ---- ---
    IMSPAY   FINANCE   IMSxxx   *        Accounts payable          Act 0.30  90
    IMSREC   FINANCE   IMSxxx   *        Accounts receivable       Act 0.30  90
    IMSRET   FINANCE   IMSxxx   *        Accounts return           Act 1.00  95
    IMSTEST  TEST0131  IMS*     *        IMS testing               Act 0.30  95
```

Figure 106. IWKLDDEF Workload Definition List View, Browse Mode

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

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 Figure 107 on page 136.

```
22MAR2004  16:17:39 ------ MAINVIEW WINDOW INTERFACE(R4.0.01)------------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IWKLDDEF==========I8AM31CT=*========(00 EDIT          )====MVIMS====D====2
CMD Workload Composite Target   System   Description               Sta Resp %Tr
--- Name---- Name----- -------- -------- ------------              --- ---- ---
    IMSPAY   FINANCE   IMSxxx   *        Accounts payable          Act 0.30  90
    IMSREC   FINANCE   IMSxxx   *        Accounts receivable       Act 0.30  90
    IMSRET   FINANCE   IMSxxx   *        Accounts return           Act 1.00  95
    IMSTEST  TEST0131  IMS*     *        IMS testing               Act 0.30  95
```

Figure 107. IWKLDDEF Workload Definition List View, Edit Mode

The primary commands and line commands provided in the IWKLDDEF view are listed in Table 30 on page 139.

Note: If someone else is editing the BBFTWK00 member when you type the EDIT command, you will get an error message telling you that the member is not available.

Opening the Add IMS Workload Definition Dialog Box

There are two ways you can open the Add IMS Workload Definition dialog box to add a new workload definition. You can use the default workload definition settings or the settings of an existing workload as a basis for the new workload definition.

- Type the **ADD** primary command on the IWKLDDEF command line to open the dialog box with the default workload definition settings.
- Type the **ADD** line command 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 Figure 108.

```
----------------------- ADD IMS WORKLOAD DEFINITION -----------------------
COMMAND ===>

Workload    ===>                          Composite   ===>
For Target  ===> *                        For System  ===> *
Description ===>

Tran Id  ===>
Class    ===>
Program  ===>
PSB      ===>
Region   ===>
RegionID ===>
Terminal ===>
Userid   ===>
TranType ===>     (DLI,DB2,FP) PgmType ===>        (MPP,MDP,TPI,DBT,NOTDBT)

Response time of ===> 1.0      seconds   for ===> 100  % of transactions
         Between ===> 00:00    (hh:mm)   and ===> 24:00    (hh:mm)
 Include Queuing ===> Y        (Y,N)
```

Figure 108. Add IMS Workload Definition Dialog Box

Note: The primary commands available in the workload definition dialog box are listed in Table 31 on page 139.

Assigning the New Workload Definition Settings

This section describes the fields used to create a workload definition. For more information about the fields, press your help key to access the online help.

Workload and Composite Names

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 OS/390 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, the workload name is automatically assigned as the composite name when you save the workload definition.

For information about choosing workload and composite names, see page 134.

Target and System IDs

Enter the complete target ID if you want to restrict the workload to a single IMS system, and enter the system ID if you want to restrict the workload to a single OS/390 system.

You can use wildcards (*, ?, and +) to expand a definition to include multiple IMS targets and OS/390 systems.

Target and system ID are required fields. If no ID is specified in a field, the field must contain an asterisk.

Description

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.

Monitored IMS Resources

You can use the resource fields to restrict a workload by transaction ID, class, program name, PSB name, region job name, region ID, LTERM name, IMS user ID, transaction type, and program type. The resource fields are optional.

You can use the wildcards *, ?, and + to expand a definition for the transaction ID, class, program, PSB, region job name, and region ID fields.

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.

Response Time and Percent of Transactions Fields

These two 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.

Include Queuing

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.

Saving and Installing 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
- type END on the command line to save the definition in inactive status and return to the previous view
- type SAVE on the command line and then type INStall in the line command area beside the new workload (or vice versa) to activate the new workload and save it in the workload list
- type 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.

Commands in the IWKLDDEF View and the IMS Workload Definition Dialog Boxes

Table 30 lists the primary commands and line commands available in the IWKLDDEF view, and Table 31 lists the primary commands available in the dialog boxes for adding and changing workload definitions.

Table 30. Primary and Line Commands in the IWKLDDEF View

Primary Commands	Function
EDIT	Changes the view from browse mode to edit mode, activating the other primary and line commands.
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 maintains the edit mode.
Line Commands	**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).
PARM DELETED(*)	Redisplays deleted workloads in a different color if the workload list was not saved after the deletions were made.
UND	Changes the status of a workload from deleted to the status in effect when the DEL line command was entered against the workload

Table 31. Primary Commands in the Dialog Boxes for Adding and Changing IMS Workload Definitions

Primary Command	Function
END	Saves the workload settings and closes the dialog box.
CANcel	Cancels a new workload or changes made to an existing workload and closes the dialog box.
SAVE	Saves the workload settings.

Maintaining Workload Definitions

This section describes how to update, delete, and recover workload definitions.

Changing a Workload Definition

To change settings for a workload

- access the IWKLDDEF view
- change browse mode to edit mode (by typing EDIT on the command line)
- type CHA in the line command area beside the workload you want to change

The CHA 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 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.

Deleting and Recovering Workload Definitions

To delete a workload definition

- access the IWKLDDEF view
- change browse mode to edit mode (by typing EDIT on the command line)
- 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.

Part 3. Solving Realtime Problems

This section describes how you can use IPSM views to analyze and solve realtime problems. For general information about views, see the *Using MAINVIEW* manual.

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Chapter 9. Monitoring Region Activity

This chapter shows you how to use the region views to monitor the activity of regions running under the target system. The views help you answer the following questions:

- What IMS dependent region activity is occurring?
- What work is IMS performing for currently processing transactions?
- What is the activity of this transaction?

The region views represent a powerful upgrade over previous REGNS services. They allow you to monitor the activity of groups of IMS regions from one or many different IMS systems.

These views also give you powerful usability enhancements. You can filter, sort, and customize to produce views that focus on exactly what you need to see and that display information the way you need to see it.

The following region views and Easy Menu are provided:

View name	Description
IRGNSUMR	Region Activity Summary
IRGNDTLR	Region Activity Detail
IRGNDLIR	Region Activity DL/I
IRGNFPLR	Region Fast Path Activity
IRGNPGMR	Region/Program
IRGNPILR	Region Activity Program Isolation
IRGNMR	Region Object Easy Menu

Accessing the Region Views

To access the region views, you can use the IPSM hyperlinks. These hyperlinks connect directly to the sysplex-enabled region views. You can also display the generic, unfiltered version of each view by simply entering the view name on any IPSM command line.

To display filtered versions of these views, hyperlink from any of the MVIMS Easy Menus (EZIFAST, EZIMS, EZISSI, EZISSR) or the appropriate fields within their pop-up submenus. (To display an Easy Menu, enter its name on any command line within IPSM.)

Figure 109 shows the IMS Fast Menu (EZIFAST), from which you can hyperlink to get to the IMS Resource Menu (shown in Figure 110 on page 147). From there, you can hyperlink to your choice of IPSM region views.

```
22MAR2004 14:13:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIFAST===========IMSxxx===*========22MAR2004=14:13:13====MVIMS====D====1
                                IMS FAST MENU
                              Timeframe - Interval
       (Change) Target--->  IMSxxx                     Status: INACTIVE
   System                  +----------------------+    Database Activity
 . IMS                     |  Place cursor on     |  . Overview
 . Status                  |   menu item and      |  . Databases
 . Log Status              |    press ENTER       |  . Volumes
 . PI Statistics           +----------------------+  . VSAM Buffer Pools
 > System Menu                                       . OSAM Buffer Pools
   Scheduling                Delays                  . Fast Path Buffer Stats
 . Statistics              . Transaction Summary       Resources
 . DMB Utilization         . Database                . Transactions by Status
 . PSB Utilization         . Volume                  . Programs by Status
 . Activity by Class       . Database Lock           . Databases by Status
 . Activity by BALG        . Latch                   . Areas by Status
   Regions                  Components of Response   > Resources Menu
 . Occupancy               . Transaction Summary       Cross Reference
 . All Regions             . Applications            . Transactions/Programs
 . Processing              . DLI                     . Programs/Databases
 . Waiting                 . Scheduling              . Databases/Transactions
   Communications          . DB2                     . Databases/Programs
 . Input Messages            Traces                  > Cross Reference Menu
 . Output Messages         . View Traces               Tools and Menus
 . Input/Output Status     . Manage Traces           > Utilities
 . Active Users              Monitors                > IMS Easy Menu
 . APPC                    . In Warning              > IMS Easy Ops Menu
 . OTMA Summary            . Workload Objective      > IMS Easy DBA Menu
 . OTMA Transactions       . Wait Analysis           . Installed Products
                           . Manage                  . What's New?
                                                     . Return...
```

Figure 109. IMS Fast Menu (EZIFAST)

You can select Resources Menu under the Resources section of EZIFAST to display the IMS Resource Menu (shown in Figure 110 on page 147).

From the IMS Resource Menu, you can hyperlink to an region view filtered on the region type or status you select.

```
22MAR2004  12:28:57 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIMSRS===========X19H=====*========22MAR2004==12:28:43====MVIMS====D====1
                                IMS Resource Menu
                               Timeframe - Realtime
               IMS ID --->  X19H
    Regions                 +----------------------+    OTMA
  . All Active Regions      |   Place cursor on    |  . OTMA Overview
  . Long Running MPRs       |    menu item and     |
  . Waiting Regions         |     press ENTER      |
  . High Occupancy          +----------------------+    Programs
  . Batch Regions                                     . Initialized
  . CICS Threads              Areas                   . Gen'ed
  . All Regions             . Initialized             . Summarized by Status
                            . Gen'ed                  . Summarized by Type
    Database                . Stopped                 . Stopped
  . Initialized             . Organization
  . Gen'ed                                              Tools and Menus
  . Summarized by Status      Transactions            > Utilities
  . Summarized by Type      . Input Msg Queued        > IMS Easy Menu
  . Stopped                 . Gen'ed                  > MVIMS Main Menu
                            . Conversational          > IMS SSI Menu
                            . WFI Trans               . Return...
```

Figure 110. IMS Resource Menu (EZIMSRS)

Region Activity Summary View

A good starting point for monitoring dependent regions is the Region Activity Summary view (IRGNSUMR) shown in Figure 111 and Figure 112. This view provides information about active regions and the transactions that are currently executing. It shows

- How long a region has been idle
- Total number of locks held by the region
- Defined class
- Currently active class for the region

IRGNSUMR also shows elapsed transaction time and number of messages queued to the transaction.

Data is collected from your entire IMSPlex environment, enabling you to monitor activity of multiple IMS regions across one or more OS/390 systems.

```
22MAR2004  09:34:35 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
 CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGNSUMR==========IMSxxx===*========22MAR2004==09:34:35====MVIMS====D====5
CMD Rgn IMS  Rgn Region   Tran     PSB      User     Tot   Tot  Tot  Tran
--- ID  ID   Typ Status   Name     Name     Name     DLI   SQL  Lock Elapsed
      1 X19H MDP IDLE-WFI          DFSIVP4  DFSIVP4                      0.0
      2 X19H MDP IDLE-WFI          DFSIVP5  DFSIVP5                      0.0
      3 X19H MDP IDLE-WFI          DBFSAMP3 DBFSAMP3                     0.0
      4 X19H BMP WT-IRLM  TTEST02  PTEST02  PTEST02      1         1  1283.4
      5 X19H BMP ACTV-USR TTEST01  PTEST01  PTEST01      1         1  1349.9
```

Figure 111. Region Activity Summary View (IRGNSUMR)

```
22MAR2004  09:43:22 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IRGNSUMR==========IMSxxx===*========22MAR2004==09:43:15====MVIMS====D====5
CMD RGN  Class Class Class Class  Region  Job/STC   IMS      MVS
--- ID       1     2     3     4    Idle  name      Jobname  Name
      1      2     3     4     5     0.1  IMSFP19X  IMSxxx   SYSD
      2      1     2     3     4     5.1  IMSFP19A  IMSxxx   SYSD
      3      1     2     3     4     1.9  IMSFP19B  IMSxxx   SYSD
      4      5                       0.0  IM81BMP2  IMSxxx   SYSD
      5      6                       0.0  IM81BMP1  IMSxxx   SYSD
```

Figure 112. Region Activity Summary View, Scrolled Right

To display an unfiltered version of this view, enter IRGNSUMR on any IPSM command line. To display a filtered view, hyperlink from any of the following Easy Menus: EZIFAST, EZIMS, EZISSI, EZISSIR.

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlinks are provided in the IRGNSUMR view.

Hyperlink from	To see
Rgn ID	Region Object Easy Menu (IRGNMR), where you can more detailed information about the region
Rgn Type	Region Activity Detail view (IRGNDTLR), which provides detailed information about the activity for the selected region
Tot DLI	Region Activity DL/I view (IRGNDLIR), which provides DL/I call information
Tot Lock (for PI)	For a region with a WT-PI status, the Region Lock List view (IPIRGLST), which shows which PI resource the region is waiting for and which regions are holding the resource For a region in any status other than WT-PI, the Region Activity PI view (IRGNPILR), which provides information about the PI activity of the region
Tot Lock (for IRLM)	For a region with a WT-ILRM status, the Region Lock List view (ILKRGLST), filtered to show only the regions that are waiting for or holding the resource this region is waiting for For a region with any status other than WT-IRLM, the ILKRGLST view, showing the resources that are held by the region

Region Activity Detail View

The Region Activity Detail view (IRGNDTLR), shown in Figure 113, displays detailed region information. It shows you what a transaction is doing. You can see

- Which databases a transaction accesses and how often
- How many times a transaction accesses a database and with what type of DL/I call
- Number of locks held by a BMP or JBP between checkpoints
- The transaction's resource usage

```
22MAR2004  09:46:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGNDTLR==========IMSxxx===*========22MAR2004==09:46:41====MVIMS====D====1
    Rgn ID.....        5  Status......  ACTV-USR  Trn Enq Time      00:00:00.00
    Job Name... IM81BMP1  Trancode....   TTEST01  Trn Elap....           1556.4
    IMS ID.....     X19H  PSB.........   PTEST01  Rgn Idle....
    MVS Name...     SYSD  LTERM.......            AGN.........              IVP
    XCF Name...           USER........   PTEST01  Classes.....               >5
    Rgn Type...      BMP  DB2 AUTHID..   BOLGBG2  DB2 Stat....
    MSG Switch.        N                           Seq BF Usg..                0
    ----------- --------  TM & DB CALL  ACTIVITY  ------------ ----------------
    DB Calls...        1  Current/Last DLI Call   Current Lock Contention (PI)
                                                   PI Activity.
    Msg GU.....        0  Msg Other...         0  Proclim.....            65535
    Msg GN.....        0  Msg PURG....         0  CMD.........                0
    CHKPT......        0  Msg ISRT             0  Get CMD.....                0
    CMD........        0  SETO........         0  APSB........                0
    GCMD.......        0  SETS........         0  DPSB........                0
    ICMD.......        0  SETU........         0  INIT........                0
    RCMD.......        0  ROLB........         0  INQY........                0
    GMSG.......        0  ROLS........         0  AUTH........                0
    CHNG.......        0  XRST........         0  DB DEQ......                0
    ----------- --------  FAST PATH---  ACTIVITY  ------------ ----------------
    NBA........        0  OBA.........         0  Used........                0
    Lock Detail
    ----------- --------  DB2---------  ACTIVITY  ------------ ----------------
    DB2 Name...           Control.....         0  SQL Total...                0
    Plan Name..           Dynamic.....         0  Inserts.....                0
    SEL/FETCH..        0  DDL.........         0  Deletes.....                0
    Opens......        0  Other.......         0  Updates.....                0
    ----------- --------  PSB/TRAN---- ---------  ------------ ----------------
    PSB Size...     2264  Mode........      SNGL  Convers.....               NO
    PSB WA.....     3360  Segment.....   MULTSEG  SPA Len.....                0
    Proclim....    65535  Queued......         0  Priority....                0
    AVG Len....      132  CPU Remain..       66K  Total Deq...                0
    Prlim CPU..      66K
    ----------- --------  SYSTEM------  ACTIVITY  ------------ ----------------
    Exec In....      BMP  TCB CPU.....         0  Elapsed Days
    ASID.......       36  SRB CPU.....         0  and Hours...         00:29:54
    Priority...      193  CPU SRV.....       888  Domain......                0
    Swap....... NON-SWAP  IO SRV......       340  Perf Grp....                0
                          MSO SRV.....       451  Perf Per....                0
    ----------- --------  PAGING------  ACTIVITY  ------------ ----------------
    Work in....        0  Int Pg-ins..         0  Vio Pg-ins..                0
    Work out...        0  Int Pg-outs.         0  Vio Pg-outs.                0
    Frames.....        0  Int Reclaims         0  Vio Reclaims                0
    Slots......        0  Swap Count..         1  Vio Slots...                0
    Com Pg-ins.        0  Com Reclaims         0  Int Stolen..                0
```

Figure 113. Region Activity Detail View (IRGNDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlinks are provided in the IRGNDTLR view.

Hyperlink from	**To see**
Rgn Type	MAINVIEW for CICS TASKXPND service (if region type is DBCTL)
DB Calls	Region Activity DL/I view (IRGNDLIR)
Current/Last DLI Call	MAINVIEW for IMS DLIST service
Current Lock Contention (PI)	PI Region Lock Wait List view (IPIRGWT), which shows either the regions waiting for locks held by this region or the holders of locks required by this region
Current Lock Detail (IRLM)	For a region with a WT-ILRM status, the PI Region Lock List view (ILKRGLST), filtered to show only the regions that are waiting for or holding the resource that this region is waiting for For a region with any status other than WT-IRLM, the ILKRGLST view, showing the resources that are held by the region
PI Activity (if not N/A)	Region Activity PI view (IRGNPILR), which shows the region program isolation statistics for the transaction that is currently running
DB2 Name	MAINVIEW for DB2 DUSER service (if appropriate)

Region Activity DL/I View

The Region Activity DL/I view (IRGNDLIR), shown in Figures 114 and 115, shows the amount of DL/I call activity incurred by the transaction currently executing.

This view shows the total number of DL/I database calls issued by a transaction against a database. Separate totals are given for GET UNIQUE, GET NEXT, GET HOLD UNIQUE, GET HOLD NEXT, REPLACE, INSERT, and DELETE calls.

The view also shows the total number of key reads and writes and non-key reads and writes. Sysplex information is provided: OS/390 name, IMS ID, region ID.

```
22MAR2004  09:53:52 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGNDLIR==========IMSxxx===*=========22MAR2004==09:53:40====MVIMS====D====2
   Database DD       Trancode Tot   GU    GN    GHU  GHN  GHNP REPL ISRT DLET
-- Name     Name     -------- DL/I  ----- ----- ---- ---- ---- ---- ---- ----
   CUSTHDAM -------- TTEST01      1                     1
         DD CUSTHDAM TTEST01
```

Figure 114. Region Activity DL/I View (IRGNDLIR)

```
22MAR2004  09:55:12 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IRGNDLIR==========IMSxxx===*========22MAR2004==09:53:40====MVIMS====D====2
   Database Total Key   Key    Nonkey Nonkey Rgn  IMS  MVS
-- Name       I/O Reads Writes  Reads Writes  Id  Id   Name
   CUSTHDAM     2                              5  X19H SYSD
         DD     2                   2          5  X19H SYSD
```

Figure 115. Region Activity DL/I View, Scrolled Right

To display an unfiltered version of the view, enter IRGNDLIR on any IPSM command line and press Enter. To see information for a selected region only, hyperlink to the view from the DB Calls field in the Region Activity Detail view (IRGNDTLR).

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

Region Activity Fast Path View

The Region Activity Fast Path view (IRGNFPLR), shown in Figure 116, shows the region Fast Path call activity for the transaction currently processing in the selected region.

This view displays the first ten Fast Path database enqueues held by the selected region. Each record shows the Fast Path database area being accessed by the transaction, the enqueue type, and the RBA for the IMS resource being locked.

```
22MAR2004  14:03:54 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                              SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGNFPLR==========IMSxxx===*========22MAR2004==14:03:54====MVIMS====D====1
    Rgn ID....        1  Status....    ACTV-USR  Trn Enq Time      00:00:00.00
    Job Name..  IM81XB1  Trancode..     TTEST01  Trn Elap....             84.6
    IMS ID....     X18H  PSB.......     PTEST01  Rgn Idle....              0.0
    MVS Name..     SYSD  LTERM.....              AGN.........
    XCF Name..     NONE  User......     PTEST01  Classes.....
    Rgn Type..      BMP  DB2 AUTHID     BOLGBG2  DB2 Stat....
    Msg Switch        N                          Seq BF Usg..                0
               Database               Area Name               RBA and ENQ TYPE
     1........    FPDB1                 FPDB101                       0015BA00
                                                                            SHR
     2........    FPDB1                 FPDB102                       00263300
                                                                            EXE
     3........    FPDB2                 FPDB201                       00B19300
                                                                            SHR
     4........
     5........
     6........
     7........
     8........
     9........
    10........
```

Figure 116. Region Activity Fast Path View (IRGNFPLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and then press your help key.

The following hyperlink is provided in the IRGNFPLR view.

Hyperlink from	To see
Rgn Type	MAINVIEW for CICS TASKXPND views (if region type is DBCTL)

Region/Program View

You can use the Region/Program view (IRGNPGMR), shown in Figures 117 and 118, to monitor active regions, the transactions that are currently executing, and the associated application program.

Data can be collected from your entire IMSPlex environment, so that you can monitor the activity of multiple IMS regions across one or more OS/390 system.

```
22MAR2004  12:50:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGNPGMR==========IMSxxx===*========22MAR2004==12:28:47====MVIMS====D====2
CMD Rgn IMS  Rgn Region   Tran     PSB      Prog Program    Msgs User     Tot
--- ID  ID   Typ Status   Name     Name     Type Status     Qued Name     DLI
      1 X26H BMP ACTV-USR          MVIPSBB1 BMP  Started         MVIPSBB1    1
      2 X26H BMP WT-PI             DDLTPSBB BMP  Started         DDLTPSBB    1
      3 X26H BMP WT-PI             MVIPSBB1 BMP  Started         MVIPSBB1    1
```

Figure 117. Region/Program View (IRGNPGMR)

```
22MAR2004  12:47:40 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IRGNPGMR==========IMSxxx===*========22MAR2004==12:28:47====MVIMS====D====2
CMD Rgn Tot  Tot  Tot  Tran  Proc  Cls Cls Cls Cls LTERM    Rgn  CICS
--- ID  DLI  SQL  Lock Elaps Limit                Name     Idle UOW
      1    1         1 21.0K                                   N/A
      2    1           21.0K                                   N/A
      3    1           18.6K                                   N/A
```

Figure 118. Region/Program View, Scrolled Right

To display an unfiltered version of this view, type IRGNPGMR on any IPSM command line. To display a filtered view, hyperlink from the EZIFAST, EZIMS, EZISSI, or EZISSIR Easy Menu.

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press your help key.

The following hyperlinks are provided in the IRGNPGMR view.

Hyperlink from	To see
Rgn ID	Region Object Easy Menu (IRGNMR), where you can access more detailed information about the region
Tot DLI	IPSM Region Activity DL/I view (IRGNDLIR), which provides DL/I call detail information
Tot Lock (for PI)	For a region with a WT-PI status, the Region Lock List view (IPIRGLST), which shows which PI resource the region is waiting for and which regions are holding the resource For a region in any status other than WT-PI, the Region Activity PI view (IRGNPILR), which provides information about the PI activity of the region
Tot Lock (for IRLM)	For a region with a WT-ILRM status, the Region Lock List view (ILKRGLST), filtered to show only the regions that are waiting for or holding the resource that this region is waiting for For a region with any status other than WT-IRLM, the ILKRGLST view, showing the resources that are held by the region

Region Activity Program Isolation View

The Region Activity Program Isolation view (IRGNPILR), shown in Figure 119, provides the region program isolation (PI) statistics for the transaction currently running. These statistics show you the amount and type of segment-locking activity an application is performing.

The statistics are reset when the transaction terminates. If the application processes multiple transactions in one scheduling, the statistics include the activity of all the transactions processed during that scheduling.

```
22MAR2004  14:03:54 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IRGNPILR==========IMSxxx===*========22MAR2004==14:03:54====MVIMS====D====1
    Rgn ID.....        3  Status......     WT-PI  Trn Enq Time      00:00:00.00
    Job Name...  IM81XB1  Trancode....            Trn Elap....             3.5K
    IMS ID.....     X18H  PSB.........  MVIPSBB1  Rgn Idle....              0.0
    MVS Name...     SJSC  LTERM.......            AGN.........
    XCF Name...     NONE  User........  MVIPSBB1  Classes.....
    Rgn Type...      BMP  ESS Type....            ESS Status..
    Msg Switch.        N  ESS Name....            DB2 AUTHID..              N/A
    Seq BF Usg.        0                          CICS UOW....              N/A
    ----------- --------  PI LOCK-----  ACTIVITY  ------------ ----------------
    SHR/UPD----           EXCLUSIVE---            Q COMMAND---
    ENQ........        1  ENQ.........         0  ENQ.........                0
    DEQ........        0  DEQ.........         0  DEQ.........                0
    CURQ.......        1  CURQ........         0  CURQ........                0
    WAIT.......        1  WAIT........         0  WAIT........                0
    TEST-------
    ENQ........        0
    DEQ........        0
    CURQ.......        0
    WAIT.......        0
```

Figure 119. Region Activity Program Isolation View (IRGNPILR)

To display an unfiltered version of this view, type IRGNPILR on any IPSM command line. To display a filtered view, hyperlink from the EZIFAST, EZIMS, EZISSI, or EZISSIR Easy Menu.

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press your help key.

The following hyperlink is provided in the IRGNIPLR view.

Hyperlink from	To see
Rgn Type	MAINVIEW for CICS TASKXPND views (if region type is DBCTL)

Region Object Easy Menu

The Region Object Easy Menu (IRGNMR), shown in Figure 120, is an Object Easy Menu for the region you select. From this menu you can access more detailed information about the region. You can hyperlink to

- Region-related information you can view
- Utilities that allow you to change targets or timeframes
- View criteria that allow you to filter your view

The Region Object Easy Menu allows you to hyperlink directly from the Region Detail field to the Region Activity Detail view (IRGNDTLR).

```
22MAR2004  08:40:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IRGNMR============IMSx1XGG=*========22MAR2004==08:40:22====MVIMS====D====1
                                   Region Menu
                               Timeframe - Realtime

            Region Name ->   IM81YB1
                     ID ->      2
                 IMS ID ->   X17H
               MVS Name ->   SYSE
    Region Information       +----------------------+    Tools and Menus
  . Class Activity           |   Place cursor on    |  > Utilities
  . Region Occupancy         |    menu item and     |  > MVIMS Main Menu
  . Region Detail            |     press ENTER      |  > IMS Easy Menu
  . Region Lock Detail       +----------------------+  > IMS Fast Menu
                                                       . Return...
    View Criteria
  . Include All Rgn Types
  . Exclude BMPs
  . Exclude DBTs
  . Exclude BMPs and DBTs
```

Figure 120. Region Object Easy Menu (IRGNMR)

To use this menu, position the cursor on any field that interests you and press Enter. The various menu options provide easy access to region views.

To hyperlink to the Region Object Easy Menu, filtered for a specific region, select the region in the Rgn ID field of the Region Activity Summary view (IRGNSUMR).

Chapter 10. Analyzing Program Isolation Lock Contention

This chapter describes the program isolation (PI) lock views, which you can use to quickly recognize and resolve PI resource contention problems. The program isolation views make it easy 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.

Note: The line commands available in the PI views are described on page 162. For more information about ultimate holders, see page 161.

You can use the PI Resource Lock Summary view (IPIRSSUM) to quickly determine which database resources are in contention. The view lists all database resources that are in contention and shows the number of regions waiting for the resource and the number of regions holding locks on the resource.

You can filter, sort, and customize the PI views to create views that focus on exactly what you need to see and display information the way you want to see it.

The following PI lock views are provided:

View name	Description
IPIRGLST	PI Region Lock List
IPIRGWT	PI Region Lock Wait List
IPIRSWT	PI Resource Lock Wait List
IPIRSSUM	PI Resource Lock Summary
IPISTAT	PI Detail Statistics
IPIMW	PI Region Waiter Menu
IPIMR	PI Resource Waiter Menu
IPIMU	PI Ultimate Holder Menu
IPIMS	PI Statistics Menu

Accessing the Program Isolation Lock Views

You can hyperlink to program isolation lock views from the following Easy Menus:

- IMS Easy Menus (EZIMS and EZIMSR)
- IMS Fast Menus Utility pop-up menu (EZIFAST and EZIFASTR)
- IMS Sysplex Easy Menus (EZISSI and EZISSIR)
- IMS Operations Menu (EZIOPSR)
- IMS DBA Easy Menus (EZIDBA and EZIDBAR)

You can also display the program isolation lock views by

- entering a PI view name on a command line
- entering VIEWS on the command line and selecting the view from the list of views
- entering MAIN on the command line, selecting PI, and selecting a view from the PI view list

Analyzing 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 MAINVIEW AutoOPERATOR for IMS implemented, you can issue the P or PA action 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 action.

Note: For more information about the P and PA actions, see page162.

Ultimate Lock Holders

The ultimate holder of a program isolation lock is either

- a region holding the lock required by another region

  or

- a region holding the lock required by a waiting region that is holding a different lock required by another waiting region

Example 1:

Region 1 is running and holds lock **A**

Region 2 is waiting for lock **A**

In example 1, Region 1 is the ultimate holder of the lock required by Region 2.

Example 2:

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**

In example 2, 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 action line command (see page 162)

Before you use a stop action 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 action. 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.

Line Commands

The program isolation views help you determine the cause of lock contention problems, and you can use the P and PA line commands to deal with contention problems.

Line Command	Function
P	Stop Region(s) P is a line command that 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 Region(s) with an Abdump PA is a line command that 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

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 on this view to stop individual regions if you decide that stopping a region is the best course of action to end a resource contention (see “Line Commands” on page 162).

When you access this view by hyperlinking from the IPIRGWT view, the information is filtered by the selected region. To see an unfiltered version of the view, enter IPIRGLST on any IPSM command line. You can also hyperlink to the IPIRGLST view from the System popup menu on EZIFAST, from all four program isolation menus, and from several of the region activity views.

```
22MAR2002  10:51:53 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
 COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IPIRGLST=========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====6
CMD +-- Waiters  ----+  Wait +-- Ultimate ----+ Rgn      Rgn PSB      Tran
---  ID Jobname   Held  Time  ID  Holder   Held Status   Typ Name     Name
      3 I8AMP2       1 253.3                   WT-PI    MPP PHDAMINQ THDAMINQ
                              6 I8APIWT2     2 ACTV-USR BMP PTEST02  GBGTRNB1
      4 I8APIWT4     2  18.9                   WT-PI    BMP PTEST02  GBGTRNB1
                              6 I8APIWT2     2 ACTV-USR BMP PTEST02  GBGTRNB1
      5 I8APIWT3     2  19.4                   WT-PI    BMP PTEST02  GBGTRNB1
                              6 I8APIWT2     2 ACTV-USR BMP PTEST02  GBGTRNB1
```

Figure 121. PI Region Lock List View (IPIRGLST)

```
22MAR2002  10:52:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IPIRGLST=========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====6
CMD +-- Tran     Database                  Lock
---  ID Name     Name     DCB      RBA      State
      3 THDAMINQ CUSTHDAM 01       00001A6C UPD
        GBGTRNB1 CUSTHDAM 01       00001A6C UPD
      4 GBGTRNB1 CUSTHDAM 01       000013DA UPD
        GBGTRNB1 CUSTHDAM 01       000013DA UPD
      5 GBGTRNB1 CUSTHDAM 01       00001A6C UPD
        GBGTRNB1 CUSTHDAM 01       00001A6C UPD
```

Figure 122. PI Region Lock List View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IPIRGLST view.

Hyperlink from	To see
(Waiters) ID	PI Region Waiter Menu (IPIMW), where you can link to more information about the selected waiter region
Waiters Jobname or (Resources) Held	Region Activity Detail view (IRGNDTLR), where you can find out what processing the selected waiting region has done up to now
(Ultimate Holder) ID	PI Ultimate Holder Menu (IPIMU), where you can link to more information about the selected ultimate holder region
Ultimate Holder or (Resources) Held	Region Activity Detail view (IRGNDTLR), where you can find out what processing the selected ultimate holder region has done up to now
PSB Name	DLIST service, which provides details about the last DL/I call issued by the selected region

PI Region Lock Wait List View

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.

This view is a good starting point for analyzing lock problems. The view highlights problems and shows their extent. (For more information about analyzing lock problems, see page 160.)

Note: You can use the P and PA region stop line commands on this 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 162).

You can access this view by entering IPIRGWT on any IPSM command line. You can hyperlink to the view from the Regions in PI Wait field in the IPISTAT view and from the Number Waiters field in the IPIRSSUM view. You can also hyperlink to the view from all four program isolation menus and from the EZIMS, EZISSI, EZIFAST (System Menu pop-up menu), EZIOPSR, and EZIDBA easy menus.

```
22MAR2002  10:51:53 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
 COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IPIRGWT==========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====3
CMD Rgn Region   Rgn PSB      Tran      Wait Cnt Ult Ultimate Database
---  ID Jobname  Typ Name     Name      Time Ult Rgn Jobname  Name     DCB
      3 I8AMP2   MPP PHDAMINQ THDAMINQ 418.1   1   6 I8APIWT2 CUSTHDAM 01
      5 I8APIWT3 BMP PTEST02  GBGTRNB1 184.2   1   6 I8APIWT2 CUSTHDAM 01
      4 I8APIWT4 BMP PTEST02  GBGTRNB1 183.7   1   6 I8APIWT2 CUSTHDAM 01
```

Figure 123. PI Region Lock Wait List View (IPIRGWT)

```
22MAR2002  10:52:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IPIRGWT==========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====6
CMD Rgn
---  ID DCB      RBA
      3 01       00001A6C
      5 01       00001A6C
      4 01       000013DA
```

Figure 124. PI Region Lock Wait List View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IPIRGWT view.

Hyperlink from	To see
Rgn ID	PI Region Waiter Menu (IPIMW), where you can link to more information about the selected waiter region
Region Jobname	Region Activity Detail view (IRGNDTLR), where you can find out what processing the selected waiting region has done up to now
PSB Name	DLIST service, which provides details about the last DL/I call issued by the selected region
Cnt Ult	PI Region Lock List view (IPIRGLST), which lists all ultimate holders of the selected waiting region
Database Name	PI Resource Lock Wait List view (IPIRSWT), which shows each resource that the selected region is waiting to get a lock for

PI Resource Lock Wait List View

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 on this 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 162).

You can display all resources that have regions waiting for them by entering IPIRSWT on any IPSM command line. You can hyperlink to the IPIRSWT view from the Database Name field in the IPIRGWT and IPIRSSUM views. You can also hyperlink to it from all four program isolation menus and from the EZIFAST System Menu pop-up menu.

```
22MAR2002  10:51:53 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPIRSWT==========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====3
CMD Database                     Wait +-- Waiter   ---+ PSB      Tran
--- Name     DCB      RBA       Time  ID Jobname  Type Name     Name
    CUSTHDAM 01       00001A6C 184.9   5 I8APIWT3 BMP  PTEST02  GBGTRNB1
    CUSTHDAM 01       000013DA 184.4   4 I8APIWT4 BMP  PTEST02  GBGTRNB1
    CUSTHDAM 01       00001A6C 418.8   3 I8AMP2   MPP  PHDAMINQ THDAMINQ
```

Figure 125. PI Resource Lock Wait List View (IPIRSWT)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IPIRSWT view.

Hyperlink from	To see
Database Name	PI Resource Waiter Menu (IPIMR), where you can link to more information about holding regions and resource or database contention
Waiter (Region) Jobname	Region Activity Detail view (IRGNDTLR), where you can find out what processing the selected waiting region has done up to now
PSB Name	DLIST service, which provides details about the last DL/I call issued by the selected region

PI Resource Lock Summary View

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 access this view by entering IPIRSSUM on any IPSM command line. You can hyperlink to the view from all four program isolation menus, from the EZIDBA DBA Easy Menu, and from the EZIFAST System Menu pop-up menu.

```
22MAR2002  10:51:53 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPIRSSUM=========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====3
Database Number  Number
Name     Waiters Holders
CUSTHDAM       3       3
```

Figure 126. PI Resource Lock Summary View (IPIRSSUM)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IPIRSSUM view.

Hyperlink from	To see
Database Name	PI Resource Lock Wait List view (IPIRSWT), which shows the regions that are waiting for the selected resource
Number Waiters	PI Region Lock Wait List view (IPIRGWT), which shows the regions that are waiting for the selected resource

PI Detail Statistics View

The PI Detail Statistics view (IPISTAT) is a realtime or past interval detail view that shows dynamic and internal IMS program isolation pool and QCB statistics.

You can access the IPISTAT view by entering the view name on any IPSM command line. You can hyperlink to the view from the IPIMW, IPIMR, and IPIMU isolation menus and from the EZIFAST Easy Menu.

```
22MAR2002  10:51:53 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPISTAT==========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====3

 ------ DYNAMIC POOL ------             ------ DYNAMIC QCBs -------
 Current Pool Size.........       65536 Current QCBs Allocated.....      2730
 Increment Value...........       65536 Increment Value............      2730
 Maximum Pool Size.........     1048576 Maximum QCBs...............     43690
 % of Current vs Max.......        6.25 % of Current vs Max........      6.25
 Free Space................       65208 Free QCBs..................      2717
 % of Freespace............       99.50 % of Freespace.............     99.52

 ------ INTERNAL POOL -----             ------ INTERNAL QCBs ------
 Current Pool Size.........        1584 Current QCBs Allocated.....        66
 Free Space................        1584 Free QCBs..................        66
 % of Freespace............      100.00 % of Freespace.............    100.00

                                        --- PI ENQUEUE SUMMARY ----
                                        Regions in PI Wait.........         3
                                        Regions Holding Locks......         4
```

Figure 127. PI Detail Statistics View (IPISTAT)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IPISTAT view.

Hyperlink from	To see
Current Pool Size	PI Statistics Menu (IPIMS), where you can link to information about waiting regions, ultimate holders, and resource contention
Regions in PI Wait	PI Region Lock Wait List view (IPIRGWT), which shows the regions that are waiting for a resource

PI Region Waiter Menu

The PI Region Waiter Menu (IPIMW) is an Object Easy Menu for a selected waiting region. You can use the menu to access detailed information about waiting regions, holding regions, and region and resource contention.

You can hyperlink to the menu from the waiters region ID field in the IPIRGLST view or the Rgn ID field in the IPIRGWT view.

```
22MAR2002  08:40:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPIMW============(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====1
                            PI Region Waiter Menu
                             Timeframe - Realtime

     Waiting Region ID ->                          3
               Jobname ->                      I8AMP2
     Resource Database ->                    CUSTHDAM
                   DCB ->                          01
                   RBA ->                    00001A6C

   Region Information      +----------------------+    Tools and Menus
 . Region Detail           |   Place cursor on    |  > IMS Easy Menu
 . DL/I Call in Progress   |    menu item and     |  > IMS Fast Menu
 . All Regions in PI Wait  |     press ENTER      |  > MVIMS Main Menu
                           +----------------------+  . Return...
   Resource Information
 . Holding Regions
 . Resource Contention
 . Database Contention
 . PI Statistics
```

Figure 128. PI Region Waiter Menu (IPIMW)

To use the menu, position the cursor on any field and press Enter.

PI Resource Waiter Menu

The PI Resource Waiter Menu (IPIMR) is an Object Easy Menu for a selected waiting region. You can use the menu to access detailed information about holding and waiting regions and about resource and database contention.

You can hyperlink to the menu from the Database Name field in the IPIRSWT view.

```
22MAR2002  08:40:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPIMR============(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====1
                            PI Resource Waiter Menu
                              Timeframe - Realtime

      Resource Database ->                  CUSTHDAM
                     DCB ->                        01
                     RBA ->                  00001A6C
      Waiting Region ID ->                         3
                 Jobname ->                    I8AMP2

    Resource Information    +----------------------+    Tools and Menus
  . Holding Regions         |   Place cursor on    |  > IMS Easy Menu
  . Resource Contention     |    menu item and     |  > IMS Fast Menu
  . Database Contention     |     press ENTER      |  > MVIMS Main Menu
  . PI Statistics           +----------------------+  . Return...

    Region Information
  . Region Detail
  . DL/I Call in Progress
  . All Regions in PI Wait
```

Figure 129. PI Resource Waiter Menu (IPIMR)

To use the menu, position the cursor on any field and press Enter.

PI Ultimate Holder Menu

The PI Ultimate Holder Menu (IPIMU) is an Object Easy Menu for a selected ultimate holder region. You can use the menu to access detailed information about ultimate holder regions and waiting regions.

You can hyperlink to the menu from the ultimate region ID field in the IPIRGLST view.

```
22MAR2002  08:40:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                              SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPIMU===========(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====1
                            PI Ultimate Holder Menu
                              Timeframe - Realtime

     Ultimate Region ID ->                       10K
                Jobname ->                    I8AMP2
     Waiting Region ID  ->                         3
                Jobname ->                    I8AMP2
     Resource Database  ->                  CUSTHDAM
                    DCB ->                        01
                    RBA ->                  00001A6C

    Ultimate Holder Info    +----------------------+    Tools and Menus
  . Region Detail           |   Place cursor on    |  > IMS Easy Menu
  . DL/I Call in Progress   |    menu item and     |  > IMS Fast Menu
                            |     press ENTER      |  > MVIMS Main Menu
    Waiter Information      +----------------------+  . Return...
  . Region Detail
  . DL/I Call in Progress
  . All Regions in PI Wait

    Resource Information
  . Resource Contention
  . Database Contention
  . PI Statistics
```

Figure 130. PI Ultimate Holder Menu (IPIMU)

To use the menu, position the cursor on any field and press Enter.

PI Statistics Menu

The PI Statistics Menu (IPIMS) provides access to detailed information about waiting regions, ultimate holders, and resource contention.

You can access the IPIMS menu by entering the view name on any IPSM command line. You can hyperlink to the menu from the Current Pool Size field in the IPISTAT view.

```
22MAR2002  08:40:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPIMS============(ALL======*=======)22MAR2002==10:51:53====MVIMS====D====1
                              PI Statistics Menu
                             Timeframe - Realtime

    PI Activity             +----------------------+    Tools and Menus
  . Regions in PI Wait      |   Place cursor on    |  > IMS Easy Menu
  . Resource Contention     |    menu item and     |  > IMS Fast Menu
  . Holding Regions         |     press ENTER      |  > MVIMS Main Menu
  . Database Contention     +----------------------+  . Return...
```

Figure 131. PI Statistics Menu (IPIMS)

To use the menu, position the cursor on any field and press Enter.

Chapter 11. Resolving N-Way Data Sharing Resource Contention

This chapter discusses the sysplex-enabled IRLM lock views, which make the task of recognizing and resolving N-way data sharing resource contention much easier. These views make it easy to answer the following questions:

- Is there a problem?
- How severe or widespread is it?
- Which resources are most contended for?
- How do I resolve the problem?

With views like the IRLM Resource Lock Summary view, you can quickly see which database resources are most contended for. The degree of contention is quantified in fields showing the number of regions waiting, longest wait times, and average wait times.

All views can be filtered on your most important criteria. You can filter, sort, and customize to produce views that focus on exactly what you need to see and to display information the way you need to see it.

The following IRLM lock views are provided:

View name	Description
ILKRGSUM	IRLM Region Lock Summary
ILKRGLST	IRLM Region Lock List
ILKRGWT	IRLM Region Lock Wait List
ILKRSSUM	IRLM Resource Lock Summary
ILKRSLST	IRLM Resource Lock List
ILKRSWT	IRLM Resource Lock Wait List

Accessing the IRLM Lock Views

You can display any of the IRLM lock views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting the view from the list displayed.

You can also hyperlink to the IRLM lock views from the following Easy Menus:

- IMS Easy Menus (EZIMS and EZIMSR)
- IMS Fast Menus Utility popup (EZIFAST and EZIFASTR)
- IMS Sysplex Easy Menus (EZISSI and EZISSIR)
- IMS Operations Menu (EZIOPSR)
- IMS DBA Easy Menus (EZIDBA and EZIDBAR)

Analyzing Lock Problems

A good way to begin analyzing lock problems is by looking at the Wait Time field in the ILKRGWT view. This 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). The IRLM Resource Lock List view shows you 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. This will take you to a list of all locks held or waited for by that particular holder.

If you want to investigate further, hyperlink from the holder's Wait Time field. You now see who holds the resource that the holder is waiting for. If desired, this process can be repeated until you find the original cause of the problem.

IRLM Region Lock Summary View

This section describes the IRLM Region Lock Summary view (ILKRGSUM), which is shown in Figure 132 and Figure 133. This view displays a list of all regions that are waiting for or holding database locks. Regions with the longest wait times are shown first. This 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 use this view to see all regions currently using IRLM resources. To display this high-level view, enter ILKRGSUM on any command line within IPSM.

```
22MAR2004  10:51:53 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
 COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKRGSUM==========IMSxxx===*========22MAR2004==10:51:53====MVIMS====D====3
CMD Rgn IMS  Rgn      Rgn Rgn      MVS      PSB      Wait Num  Longest Highest
--- Id  Id   Jobname  Typ Status   Name     Name     Time Held Held      State
      5 X19H IM81BMP1 BMP WT-IRLM  SYSD     PTEST01   5.7    1     5.7   W-UPD
      4 X19H IM81BMP2 BMP ACTV-USR SYSD     PTEST02          1    51.1   H-UPD
    SYS X19H DLI -TCB SYS          SYSD                      3   184.2   H-SHR
```

Figure 132. IRLM Region Lock Summary View (ILKRGSUM)

```
22MAR2004  10:52:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =ILKRGSUM==========IMSxxx===*========22MAR2004==10:51:53====MVIMS====D====3
CMD Rgn XCF     IRLM   Tran
--- Id  Name      Id   Name
      5 NONE    IR21
      4 NONE    IR21
    SYS NONE    IR21
```

Figure 133. IRLM Region Lock Summary View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ILKRGSUM view.

Hyperlink from	**To see**
Rgn Jobname	Detailed region information
Num Held	All resources held by a region
Wait Time	Which resource is waited for
Wait Time, then Wait Time in the ILKRSWT view	All holders of a resource

IRLM Region Lock List View

This section describes the IRLM Region Lock List view (ILKRGLST), which is shown in Figure 134 and Figure 135. It shows all locks held or waited for by all regions. Locks held or waited for are shown by region. The 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

To display the IRLM Region Lock List view, you can enter the view name (ILKRGLST) on any IPSM command line. If you hyperlink to this view from another view, the information is filtered according to certain criteria.

```
22MAR2004  10:53:24 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKRGLST==========IMSxxx===*========22MAR2004==10:53:24====MVIMS====D====6
CMD Rgn IMS  Rgn      Rgn Rgn      Database                          Cur Wait Hold
--- Id  Id   Jobname  Typ Status   Name     DCB/Area RBA/Type F G Sta Time Time
      5 X19H IM81BMP1 BMP WT-IRLM  CUSTHDAM 1        00000D38 P G UPD  7.2
      4 X19H IM81BMP2 BMP ACTV-USR CUSTHDAM 1        00000D38 P G UPD      52.6
      5 X19H IM81BMP1 BMP WT-IRLM  CUSTHDAM 1        000006A6 P G UPD       7.2
    SYS X19H DLI -TCB SYS                            COMMAND  B G RO       185.
    SYS X19H DLI -TCB SYS                            COMMAND  F G RO       185.
    SYS X19H DLI -TCB SYS          CUSTHDAM 1        DATASET  B G RO       92.6
```

Figure 134. IRLM Region Lock List View (ILKRGLST)

```
22MAR2004  10:54:08 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =ILKRGLST==========IMSxxx===*========22MAR2004==10:53:24====MVIMS====D====6
CMD Rgn Hold PSB      MVS      XCF      IMS      IRLM Tran
--- Id  Time Name     Name     Name     Jobname  Id   Name
      5      PTEST01  SYSD     NONE     IMSxxx   IR21
      4 52.6 PTEST02  SYSD     NONE     IMSxxx   IR21
      5  7.2 PTEST01  SYSD     NONE     IMSxxx   IR21
    SYS 185.          SYSD     NONE     IMSxxx   IR21
    SYS 185.          SYSD     NONE     IMSxxx   IR21
    SYS 92.6          SYSD     NONE     IMSxxx   IR21
```

Figure 135. IRLM Region Lock List View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ILKRGLST view.

Hyperlink from	To see
Wait Time	IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource
Hold Time	A filtered version of the IRLM Resource Lock List view (ILKRSLST), where you can see just the waiters of a given resource
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see what processing the region has done up until now

IRLM Region Lock Wait List View

This section describes the IRLM Region Lock Wait List view (ILKRGWT), which is shown in Figure 136 and Figure 137. You can use this view to see the list of all regions 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

This view is a good starting point for analyzing lock problems. It highlights problems and allows you to see their extent. By hyperlinking, you can find their cause.

To display the IRLM Region Lock Wait List view, you can enter the view name (ILKRGWT) on any IPSM command line, or you can hyperlink from the Number Waiters field of the IRLM Resource Lock Summary view (ILKRSSUM).

```
22MAR2004  10:54:56 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKRGWT===========IMSxxx===*========22MAR2004==10:54:55====MVIMS====D====1
CMD Rgn IMS  Rgn      Rgn Rgn      Database                       Cur Wait IRLM
--- Id  Id   Jobname  Typ Status   Name     DCB/Area RBA/Type F G Sta Time ID
      5 X19H IM81BMP1 BMP WT-IRLM  CUSTHDAM 1        00000D38 P G UPD  8.7 IR21
```

Figure 136. IRLM Region Lock Wait List View (ILKRGWT)

```
22MAR2004  10:55:32 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =ILKRGWT===========IMSxxx===*========22MAR2004==10:54:55====MVIMS====D====1
CMD Rgn MVS      XCF      IMS      PSB     Tran
--- Id  Name     Name     Jobname  Name    Name
      5 SYSD     NONE     IMSxxx   PTEST01
```

Figure 137. IRLM Region Lock Wait List View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ILKRGWT view.

Hyperlink from	To see
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see what processing the thread has done up until now
Wait Time	IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource

IRLM Resource Lock Summary View

This section describes the IRLM Resource Lock Summary view (ILKRSSUM), shown in Figure 138 and Figure 139. This view shows you 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).

With this view, you can see

- Every resource held by any participant in an N-way data sharing group
- Every resource waited for by any participant
- How many waiters there are
- How many holders there are

You can also see

- The longest wait time
- The average wait time
- The longest hold time

To display the IRLM Resource Lock Summary view, enter the view name (ILKRSSUM) on any IPSM command line.

```
22MAR2004  10:46:24 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKRSSUM==========IMSxxx===*========22MAR2004==10:46:24====MVIMS====D====2
CMD Database                        Highest Number  Oldest Avg  Number  Oldest
--- Name     DCB/Area RBA/Type F G State   Waiters Waiter Wait Holders Holder
    CUSTHDAM 1        00000D38 P G H-UPD         1    0.2  0.2       1   45.6
    CUSTHDAM 1        000006A6 P G H-UPD                             1    0.2
```

Figure 138. IRLM Resource Lock Summary View (ILKRSSUM)

```
22MAR2004  08:31:51 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
<W1 =ILKRSSUM==========IMSx1XGG=*========22MAR2004==08:28:00====MVIMS====D====2
CMD Database XCF      MVS      IRLM
--- Name     Group    Name     Id
    CUSTHDAM IMSNWAY  SYS*     IR2*
    CUSTHDAM IMSNWAY  SYS*     IR2*
```

Figure 139. IRLM Resource Lock Summary View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ILKRSSUM view.

Hyperlink from	**To see**
Number Waiter	Which regions are waiting for a resource
Number Holders	Which regions are holding a resource

IRLM Resource Lock List View

This section describes the IRLM Resource Lock List view (ILKRSLST), shown in Figure 140 and Figure 141. This view shows all waiters for and holders of any database resource. With this 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

If you display this view without specifying any parameters (by entering ILKRSLST on any command line within IPSM), you see 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 waiters and holders for the given resource only. (Hyperlinking *to* this view also filters it to show waiters and holders for a selected resource only.)

```
22MAR2004  10:48:23 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKRSLST==========IMSxxx===*========22MAR2004==10:48:23====MVIMS====D====6
CMD Database                       Cur Wait Hold Rgn IMS  Rgn      Rgn Rgn
--- Name     DCB/Area RBA/Type F G Sta Time Time Id  Id   Jobname  Typ Status
    CUSTHDAM 1        00000D38 P G UPD  2.2        5 X19H IM81BMP1 BMP WT-IRLM
    CUSTHDAM 1        000006A6 P G UPD       2.2   5 X19H IM81BMP1 BMP WT-IRLM
    CUSTHDAM 1        00000D38 P G UPD      47.6   4 X19H IM81BMP2 BMP ACTV-USR
    CUSTHDAM 1        DATASET  B G RO       87.6 SYS X19H DLI -TCB SYS
                      COMMAND  B G RO       180. SYS X19H DLI -TCB SYS
                      COMMAND  F G RO       180. SYS X19H DLI -TCB SYS
```

Figure 140. IRLM Resource Lock List View (ILKRSLST)

```
22MAR2004  10:48:59 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =ILKRSLST==========IMSxxx===*========22MAR2004==10:48:23====MVIMS====D====6
CMD Database Rgn      MVS      PSB      XCF      IMS      IRLM Tran
--- Name     Status   Name     Name     Name     Jobname  Id   Name
    CUSTHDAM WT-IRLM  SYSD     PTEST01  NONE     IMSxxx   IR21
    CUSTHDAM WT-IRLM  SYSD     PTEST01  NONE     IMSxxx   IR21
    CUSTHDAM ACTV-USR SYSD     PTEST02  NONE     IMSxxx   IR21
    CUSTHDAM          SYSD              NONE     IMSxxx   IR21
                      SYSD              NONE     IMSxxx   IR21
                      SYSD              NONE     IMSxxx   IR21
```

Figure 141. IRLM Resource Lock List View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ILKRSLST view.

Hyperlink from	To see
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see detailed information about the region
Wait Time	Another version of the IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource
Hold Time	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.

To display the unfiltered IRLM Resource Lock List view, enter the view name (ILKRSLST) on any IPSM command line and press Enter. To display a filtered IRLM Resource Lock List view, hyperlink from the Wait Time field in the IRLM Region Wait List view (ILKRGWT).

IRLM Resource Lock Wait List View

This section describes the IRLM Resource Lock Wait List view (ILKRSWT), shown in Figure 142 and Figure 143. This view provides a complete list of resources against which regions are waiting to get locks. With this 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

If you display this view without specifying any parameters (by entering ILKRSWT on any command line within IPSM), you see all resources that have regions waiting for them.

If you want to see waiters and holders for a specific resource only, hyperlink from the Wait Time field within this view. (Hyperlinking *to* this view from the Wait Time field of ILKRGWT view also shows waiters and holders for a selected resource only.)

```
22MAR2004  10:50:27 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ILKRSWT===========IMSxxx===*========22MAR2004==10:50:27====MVIMS====D====1
CMD Database                       Cur Wait Rgn IMS  Rgn      Rgn Rgn      MVS
--- Name     DCB/Area RBA/Type F G Sta Time Id  Id   Jobname  Typ Status   Name
    CUSTHDAM 1        00000D38 P G UPD  4.3   5 X19H IM81BMP1 BMP WT-IRLM  SYSD
```

Figure 142. IRLM Resource Lock Wait List View (ILKRSWT)

```
22MAR2004  10:51:05 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =ILKRSWT===========IMSxxx===*========22MAR2004==10:50:27====MVIMS====D====1
CMD Database MVS      PSB      XCF      IRLM Tran
--- Name     Name     Name     Name     Id   Name
    CUSTHDAM SYSD     PTEST01  NONE     IR21
```

Figure 143. IRLM Resource Lock Wait List View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ILKRSWT view.

Hyperlink from	To see
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see what processing the region has done up until now
Wait Time	IRLM Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource.

Chapter 12. Managing Terminal and User Status

This chapter describes the terminal and user status views, which provide information about all VTAM and non-VTAM terminals and users, both static and dynamic, across multiple IMS systems.

Help desk operators and system programmers gain substantial advantage from the views, whether they are working with a single IMS or in a multiple-IMS environment. The status views provide

- A way to manage the status of all terminals and users
- Expanded information about IMS terminals and users
- Easy identification of IMS users and the transactions they are running
- A way to solve user-reported problems

With the status views, you can find out whether user or LTERM messages are building up in the local message queues, and you can take the appropriate action to avoid IMS message queue buildup.

The following terminal and user status views and menu are provided:

View name	Description
IUSTAT	Communication Activity and Status
IUDETAIL	Communication Activity and Status Detail
IULTERM	LTERM Status
IUNODE	Node and Line/PTERM Status
IUSTATZ	Summarized Communication Activity and Status
IUSEXCP	Users/LTERMs/Nodes with Exceptions
IUMUSR	Communications Menu

The following user status views and menu are provided:

View name	Description
IUSERI	User Information
IUSERS	User Structure Status
IUSERT	User Structure Timestamp
IUSRMR	User Related Menu

Managing Terminal and User Status

You can use the terminal and user status views to determine

- The status of all terminals and users, static and dynamic, VTAM and non-VTAM, across multiple IMS systems
- How many messages are queued for output
- The last transaction input entered on a terminal

You can use the views to determine why a terminal is not responsive. You can quickly access the status of a terminal by examining input/output status summaries and evaluating last transaction/LTERM information.

You can get more information by hyperlinking to a detail view that shows all the information available for a selected terminal or user.

Accessing Information about IMS Users

The terminal and user status views provide information about IMS users across multiple systems. Information includes

- Status of each user structure and its associated resources:
  - LTERM and node names for VTAM terminals and users
  - LTERM name, line number, and physical terminal number for non-VTAM terminals and users
- Output messages enqueued to the LTERM or user

Additional information includes

- Sign-on user ID (which can be different from user name for dynamically created terminals), if available
- Terminal type for users — static for users signed on to static terminals and dynamic for ETO users
- Timestamp of user structure creation (available with IMS 6.1 and later)
- Timestamp of last transaction entered (available with IMS 6.1 and later)

Identifying IMS Users

Users are not always easy to find in a sysplex environment. With shared message queues, users may log on to one IMS and yet their work may be processed somewhere else. With VGR (VTAM generic resource), the users do not even know which IMS they are logged on to.

The user status views make it unnecessary to jump from IMS to IMS to find where a user was logged on. Instead, you can issue one query from any IPSM session to find out what IMS the user is logged on to. Given just the user ID or LTERM name, the views show you the name of the IMS where current and past user sessions were created.

Solving User-Reported Problems

Once you find a user, the status views give you the ability to solve user problems quickly. You can easily determine if a user-reported problem is due to

- Work processed but not yet received by the user
- Work running but not completed
- Work queued but not running

Work Processed but Not Received

Queued messages could be waiting either from the user's current session or from an earlier session. With the status views, you can see at a glance if unreceived messages are waiting and then take appropriate action.

Work Running but Not Completed

Another common cause of a problem is that work is running but not completed. With only the user or LTERM ID to go on, you can quickly see what the last transaction was. Then you can hyperlink to the Region Activity Summary view (IRGNSUMR), where you will find all the user's transactions throughout the sysplex. Starting in the region views, you can analyze what is delaying a transaction.

Work Queued but Not Running

Another potential cause of a problem may be that the work is queued but not running. If you hyperlink to the region views but do not see the transaction running there, you can go to ITRSUMR view to check the transaction's status. If the transaction is stopped, you can issue a line command to start it. If it is not stopped, you can see if some needed resource is unavailable (for example, if no region is associated with the class or the priority is very low.) You can then take the action required to enable processing of the transaction.

Taking Action

The terminal and user status views help you determine the cause of terminal and user problems and allow you to correct the problems from your screen. You can issue line commands on the screen where you find a problem. You do not need to remember command syntax.

Table 32 lists the actions available as line commands in the terminal and user status tabular views.

Table 32. Line Commands Provided in the Terminal and User Status View

Line Command	Result
PU	Stop a user
SU	Start a user
SL	Start an LTERM
PL	Stop an LTERM

Note: Action support requires a license for MAINVIEW AutoOPERATOR for IMS.

Identification of IMS Users in Sysplex Environments

The user status views help you find users, the transactions they are running, and the causes of their problems, even in a multiple-IMS environment.

Another advantage of the user status views is that you can do extensive searches, for example, looking for all the back ends where your work may be running.

Accessing the Terminal and User Status Views

You can access the terminal and user status views by entering a view name on the command line or by entering VIEWS and then selecting the view from the list provided.

You can also access the views by selecting the Input/Output Status option in the

- IMS Easy Menus (EZIMS and EZIMSR)
- IMS Fast Menus (EZIFAST and EZIFASTR)
- IMS Menus (IMSMPG and IMSMPGR)

EZIFAST menu is shown in Figure 144.

```
22MAR2004 14:13:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIFAST===========IMSxxx===*========22MAR2004=14:13:13====MVIMS====D====1
                                IMS FAST MENU
                              Timeframe - Interval
       (Change) Target--->  IMSxxx                    Status: INACTIVE
   System                  +----------------------+    Database Activity
 . IMS                     |  Place cursor on     |  . Overview
 . Status                  |   menu item and      |  . Databases
 . Log Status              |    press ENTER       |  . Volumes
 . PI Statistics           +----------------------+  . VSAM Buffer Pools
 > System Menu                                       . OSAM Buffer Pools
   Scheduling                Delays                  . Fast Path Buffer Stats
 . Statistics              . Transaction Summary       Resources
 . DMB Utilization         . Database                . Transactions by Status
 . PSB Utilization         . Volume                  . Programs by Status
 . Activity by Class       . Database Lock           . Databases by Status
 . Activity by BALG        . Latch                   . Areas by Status
   Regions                  Components of Response   > Resources Menu
 . Occupancy               . Transaction Summary       Cross Reference
 . All Regions             . Applications            . Transactions/Programs
 . Processing              . DLI                     . Programs/Databases
 . Waiting                 . Scheduling              . Databases/Transactions
   Communications          . DB2                     . Databases/Programs
 . Input Messages            Traces                  > Cross Reference Menu
 . Output Messages         . View Traces               Tools and Menus
 . Input/Output Status     . Manage Traces           > Utilities
 . Active Users              Monitors                > IMS Easy Menu
 . APPC                    . In Warning              > IMS Easy Ops Menu
 . OTMA Summary            . Workload Objective      > IMS Easy DBA Menu
 . OTMA Transactions       . Wait Analysis           . Installed Products
                           . Manage                  . What's New?
                                                     . Return...
```

Figure 144. EZIFAST Easy Menu

To access the terminal and user status views from EZIFAST menu, put the cursor on the Input/Output Status option and press Enter. When you select the Input/Output Status, the Communication Activity and Status view (IUSTAT) is displayed.

Communication Activity and Status View

The Communication Activity and Status view (IUSTAT) shows the status and output message activity of all terminals and users. You can hyperlink in the User Name field in the IUSTAT view to access the Communication Activity and Status Detail view (IUDETAIL), which shows detailed information about the selected terminal or user.

The IUSTAT view summarizes the input and output status for each terminal and user as either “Good” or “Bad.” You can quickly check status by looking at the input and output status summary fields and by evaluating information in the last transaction/LTERM field.

On the Communications Menu (IUMUSR), you can select the Devices w/“Bad” Status option to hyperlink to an IUSTAT view that shows only those terminals and users with a Bad input or output status. That way you can isolate and monitor terminals and users with input/output problems.

You can hyperlink on a Bad status in the input or output status summary field to scroll right and locate the reason (or reasons) for the failed condition from the following possibilities (listed in the order shown in the view):

A lock command was issued.	Message queueing was stopped.
A loop test is in progress.	Message sending was stopped.
Input was stopped.	User structure is in response mode.
The LTERM is waiting for a response.	The user was stopped.
Output queuing was stopped.	A dequeue purge command was issued.
Output was stopped.	An I/O error occurred in the queue.

If the IUSTAT view shows a Bad status summary for a terminal or user, you can use line commands to solve the problem (if you have a license for MAINVIEW AutoOPERATOR for IMS).

If a terminal or user is “hung” but has Good status indicators on IUSTAT, you can hyperlink from the Last Trn/Ltrm field to the Transaction Queue Status view (ITRSUMR) where you can check the processing status of the last transaction requested by the terminal or user.

The Communication Activity and Status view provides the following message activity information:

- Number of messages currently enqueued to each terminal or user
- Number of messages queued for output from each terminal or user
- Age of the last message enqueued to dynamic SPQBs
- Destination of the last message entered by each terminal or user

You can hyperlink to the Communication Activity and Status view from the Input/Output Status option in the

- Communications Menu and the User Related Menu (IUMUSR and IUSRMR)
- IMS Easy Menus (EZIMS and EZIMSR)
- IMS Fast Menus (EZIFAST and EZIFASTR)
- IMS Detail Menus (IMSMPG and IMSMPGR)

You can hyperlink to an IUSTAT view that shows only terminals and users with a Bad status by selecting the Devices w/“Bad” Status option in the IUMUSR menu.

An example Communication Activity and Status view is shown in Figures 145, 146, and 147.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IUSTAT============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD LTERM    User     Signon   NodeName Enq  Que     I/P  O/P  Last     IMS
--- Name     Name     User ID  LinePtrm Cnt  Cnt Age Stat Stat Trn/Ltrm ID
    MASTER                     DFSPMCLB   29  29   0 Good Good          Y19H
    DFSTCFI                    DFSPMCLB    2   2   0 Good Good          Y19H
    TMRTRN   TMRTRN                         1   1   0 Good Good          Y19H
    SMASTER                        2/  1   30   0   0 Good Good          Y19H
    MSNS2                         10/  2    0   0   0 Bad  Bad           Y19H
    MSNS1                         10/  1    0   0   0 Bad  Bad           Y19H
    MSNI5                      SYSDVTAM    0   0   0 Bad  Bad           Y19H
```

Figure 145. Communication Activity and Status View (IUSTAT)

When an IMS is using shared message queues, the Age field displays a value of SMQ, indicating that the statistic is available only for local message queue environments.

If SMQ is displayed in the Que Cnt field, the ISQQUERY parameter in BBPARM member IMFBEX00 is preventing collection of message count data for IMS systems using shared message queues. When the ISQQUERY parameter is allowing collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, “Controlling Shared Message Queue Data Collection” on page 335.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IUSTAT============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD LTERM    IMS           Loop Input N/L/P N/L/P  N/L/P  LTERM  LTERM  SPQB  S
--- Name     ID       Lckd Test Stopd Resp  Q Stp Out Stp Q Stp Out Stp Resp Ou
    MASTER   Y19H
    DFSTCFI  Y19H
    TMRTRN   Y19H
    SMASTER  Y19H
    MSNS2    Y19H               Y                 Y
    MSNS1    Y19H               Y                 Y
    MSNI5    Y19H               Y                 Y
```

Figure 146. Terminal Activity and Status View, Scrolled Right

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IUSTAT============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD LTERM     SPQB   Purg Que   MVS
--- Name     Out Stp -ing Error ID
    MASTER                      SJSC
    DFSTCFI                     SJSC
    TMRTRN                      SJSC
    SMASTER                     SJSC
    MSNS2                       SJSC
    MSNS1                       SJSC
    MSNI5                       SJSC
```

Figure 147. Terminal Activity and Status View, Scrolled Right Again

For descriptions of the fields in the IUSTAT view, see the online help. To display online field help, position the cursor on any field and press your help key.

You can control terminal and user status using line commands in the IUSTAT view (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to start or stop LTERMs and users. (The specific line commands for these actions are listed in the IUSTAT view help and in Table 32 on page 190.)

The following hyperlinks are provided in the IUSTAT view.

Hyperlink from	To see
LTERM Name	IUMUSR menu, where you can get quick access to terminal and user information
User Name	IUDETAIL view, where you can view all information available for a terminal or user
I/P Stat (Bad)	Status indicator fields (scrolled right) to locate the reason for the failed condition
O/P Stat (Bad)	Status indicator fields (scrolled right) to locate the reason for the failed condition
Last Trn/Ltrm	ITRSUMR view, where you can issue line commands against the transaction

Communication Activity and Status Detail View

The Communication Activity and Status Detail view (IUDETAIL), shown in Figure 148, provides detailed information for a selected terminal or user.

You can hyperlink to the IUDETAIL view from

- The Input/Output Details option in IUMUSR and IUSRMR menus
- The User Name field in the IUSTAT view
- The LTERM Name field in the IUSERI view
- A node name (VTAM) or line number and PTERM number (non-VTAM) in the IUSERI view

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IUSTAT===IUDETAIL=IMSxxx===*========22MAR2004==15:27:38====MVIMS====D====1
    -------- User ---------              ------ Messages -------
    User Name.............              Input Message Count....        0
    Signon User ID........              Queue Count............        0
    SPQB Name.............              Enqueue Count..........        0
    User Creation Timestamp 000000000000 Dequeue Count..........        0
    In Conversation.......              Age....................        0
    Conversation Held......             OTMA Count............
    Terminal Allocated.....            Y
                                        --------- CQS ---------
    ------- Device --------              CQS in Use............       No
    LTERM Name............        MSNI5 Registered............
    Node Name or Line/PTERM     SYSDVTAM Notified Msgs on Queue.
    Terminal Create........       STATIC
    Device Type...........        M VTM ---- Output Status ----      Bad
    Idle Without Shutdown..             N/L/P in Response Mode.
    In Conversation.......              N/L/P Stop for Queuing.
    Conversation Held......             N/L/P Stop for Output..
                                        LTERM Stop for Queuing.        Y
    -- Status Recovery ----             LTERM Stop for Output..
    Status Recovery Mode...         None SPQB in Response Mode..
    Recover CONV/STSN/FP...        N/N/N SPQB Stop for Output...
                                         Purging................
    ---- Input Status -----          Bad Queue Error............
    Last Tran/LTERM........             Locked.................
    Last Enqd Trn Timestamp 000000000000 In Loop Test...........
    Input Stopped..........            Y
    Locked.................
    In Loop Test...........

    IMS Job Name...........       IMSxxx
    IMS ID.................         Y71H
    MVS ID.................         SJSC
```

Figure 148. Communication Activity and Status Detail View (IUDETAIL)

When an IMS is using shared message queues, the Age field displays a value of SMQ, indicating that the statistic is available only for local message queue environments.

If SMQ is displayed in the Queue Count field, the ISQQUERY parameter in BBPARM member IMFBEX00 is preventing collection of message count data for IMS systems using shared message queues. When the ISQQUERY parameter is allowing collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, “Controlling Shared Message Queue Data Collection” on page 335.

You can control terminal and user status using line commands next to the User heading (--- User ---) in the IUDETAIL view (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to start or stop LTERMs and users. (The specific line commands for these actions are listed in the IUDETAIL view help and in Table 32 on page 190.)

The following hyperlinks are provided in the IUDETAIL view.

Hyperlink from	**To see**
User Name	IUMUSR menu, where you can get quick access to terminal and user information
LTERM Name	IULTERM view, which displays information about the status of the LTERM associated with a terminal or user
Node Name or Line/PTERM	IUNODE view, which displays information about the node (or line number and PTERM number) associated with the terminal or user
Last Tran/LTERM	ITRSUMR view, where you can issue line commands against the transaction
Age	IUSERT view, which has timestamps showing when the last transaction or LTERM message was enqueued and when the user structure was created **Note:** The hyperlink to IUSERT is valid only when the age value is greater than zero.

LTERM Status View

The LTERM Status view (IULTERM), shown in Figure 149 and Figure 150, provides information about the status of the LTERMs associated with IMS terminals and users.

You can hyperlink to the IULTERM view from

- The LTERM name field in the IUDETAIL view
- The LTERM Status option in the IUMUSR and IUSRMR menus

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IULTERM===========IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==390
CMD LTERM    User     Term No   No        Purg Sgnd CQS  CQS  OTMA Que  NodeNam
--- Name     Name     Allc Send Queu Lckd ing  on   Inf  Noti Cnt  Err  LinePtr
    C1QAAI1A L1WC1I01
    DFSMTCNT          Y                                                     0/
    DFSRMCNT          Y                                                     0/
    DFSTCF            Y                                                     4/
    DFSTCFI           Y                                                  DFSPMCL
    DFSTCG            Y                                                  A036T11
    ISC4XRF           Y                                                  Y19H
    IVPPRT1           Y                                                     2/
    TMRTRN   TMRTRN
    TMRSTN   TMRSTN
    MASTER            Y                                                  DFSPMCL
    MSC110            Y                                                  SYSDVTA
    MSC12             Y                                                     5/
```

Figure 149. LTERM Status View (IULTERM)

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IULTERM===========IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==390
CMD LTERM    NodeName Devic Signon   IMS      MVS      IMS
--- Name     LinePtrm Type  UserID   ID       ID       Jobname
    C1QAAI1A          SUBPL          Y19H     SJSC     IMSxxx
    DFSMTCNT    0/  1 SCNSL          Y19H     SJSC     IMSxxx
    DFSRMCNT    0/  2 SCNSL          Y19H     SJSC     IMSxxx
    DFSTCF      4/  1 TCF            Y19H     SJSC     IMSxxx
    DFSTCFI  DFSPMCLB SLU-2          Y19H     SJSC     IMSxxx
    DFSTCG   A036T117 SLU-2          Y19H     SJSC     IMSxxx
    ISC4XRF  Y19H     LU6.1          Y19H     SJSC     IMSxxx
    IVPPRT1     2/  1 SLOCL          Y19H     SJSC     IMSxxx
    TMRTRN            ETO            Y19H     SJSC     IMSxxx
    TMRSTN            ETO            Y19H     SJSC     IMSxxx
    MASTER   DFSPMCLB SLU-2          Y19H     SJSC     IMSxxx
    MSC110   SYSDVTAM M VTM          Y19H     SJSC     IMSxxx
    MSC12       5/  1 M CTC          Y19H     SJSC     IMSxxx
```

Figure 150. LTERM Status View, Scrolled Right

For descriptions of the fields in the IULTERM view, see the online help. To display online field help, position the cursor on any field and press your help key.

You can use line commands in the IULTERM view to control terminal and user status (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to start or stop LTERMs and users. (The specific line commands for these actions are listed in the IULTERM view help and in Table 32 on page 190.)

The following hyperlink is provided in the IULTERM view.

Hyperlink from	To see
LTERM Name	IUSRMR menu, where you can get quick access to terminal and user information

Node Line/PTERM Status View

The Node Line/PTERM Status view (IUNODE), shown in Figure 151, provides information about

- Status of the node for VTAM terminals and users
- Status of the line number and physical terminal number for non-VTAM terminals and users

The view is useful for diagnosing problems associated with VTAM or non-VTAM sessions.

You can hyperlink to the IUNODE view from

- A node name or line number and PTERM number in the IUDETAIL view
- The Node Status option in the IUMUSR and IUSRMR menus.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IUNODE============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==390
CMD NodeName User     Inpu Outp Queu Idle Loop Wait Lterm    IMS    MVS
--- LinePtrm Name     Stop Stop Stop With Test Resp Name     ID     ID
             L1WB1I07                               B1QGGI1A Y19H   SJSC
       3/  1          Y    Y    Y                   IVPSPL1  Y19H   SJSC
       4/  1                                        DFSTCF   Y19H   SJSC
       5/  1          Y    Y                        MSC12    Y19H   SJSC
    DFSPMCLB                                        DFSTCFI  Y19H   SJSC
    DFSPMCLB                                        MASTER   Y19H   SJSC
```

Figure 151. Node Line/PTERM Status View (IUNODE)

For descriptions of the fields in this view, see the online help. To display online help for a field, position the cursor on the field and press your help key.

You can use line commands in the IUNODE view to control terminal and user status (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to start or stop LTERMs and users. (The specific line commands for these actions are listed in the IUNODE view help and in Table 32 on page 190.)

The following hyperlink is provided in the IUNODE view.

Hyperlink from	To see
NodeName LinePtrm	IUSRMR menu, where you can get quick access to terminal and user information

Summarized Communication Activity and Status View

The Summarized Communication Activity and Status view (IUSTATZ), shown in Figures 152, 153, and 154, is summarized by LTERM name, and it shows the status and output message activity of all terminals and users.

You can use this view to manage and control terminals that are defined on a single IMS system or on multiple IMS systems. An LTERM that is present in multiple IMS systems is displayed in one row of the view, and the information about the LTERM is aggregated. Line commands that are issued against the LTERM will be issued in all the IMS systems.

Note: Line commands work only if you have implemented MAINVIEW AutoOPERATOR for IMS.

For more information about how to use this view, see “Communication Activity and Status View” on page 192.

To display the IUSTATZ view, you can enter the view name on any IPSM command line. You can also hyperlink to the view from the IMS Operations Menu (EZIOPSR).

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IUSTATZ===========IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD LTERM    User     Signon   NodeName IMS        Enq Que     I/P  O/P  Last
--- Name     Name     User ID  LinePtrm ID         Cnt Cnt Age Stat Stat Trn/Lt
    MASTER                     DFSPMCLB Y19H        29  29   0 Good Good
    DFSTCFI                    DFSPMCLB Y19H         2   2   0 Good Good
    TMRTRN   TMRTRN                     Y19H         1   1   0 Good Good
    SMASTER                       2/  1 Y19H        30   0   0 Good Good
    MSNS2                        10/  2 Y19H         0   0   0 Bad  Bad
    MSNS1                        10/  1 Y19H         0   0   0 Bad  Bad
    MSNI5                      SYSDVTAM Y19H         0   0   0 Bad  Bad
```

Figure 152. Summarized Communication Activity and Status View (IUSTATZ)

When an IMS is using shared message queues, the Age field displays a value of SMQ, indicating that the statistic is available only for local message queue environments.

If SMQ is displayed in the Que Cnt field, the ISQQUERY parameter in BBPARM member IMFBEX00 is preventing collection of message count data for IMS systems that are using shared message queues. When the ISQQUERY parameter is allowing collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, “Controlling Shared Message Queue Data Collection” on page 335.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IUSTATZ===========IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD LTERM    Last          Loop Input N/L/P N/L/P  N/L/P  LTERM  LTERM  SPQB  S
--- Name     Trn/Ltrm Lckd Test Stopd Resp  Q Stp Out Stp Q Stp Out Stp Resp Ou
    MASTER
    DFSTCFI
    TMRTRN
    SMASTER
    MSNS2                       Y                Y
    MSNS1                       Y                Y
    MSNI5                       Y                Y
```

Figure 153. Summarized Terminal Activity and Status View, Scrolled Right

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IUSTATZ===========IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD LTERM     SPQB   Purg Que   MVS
--- Name     Out Stp -ing Error ID
    MASTER                      SJSC
    DFSTCFI                     SJSC
    TMRTRN                      SJSC
    SMASTER                     SJSC
    MSNS2                       SJSC
    MSNS1                       SJSC
    MSNI5                       SJSC
```

Figure 154. Summarized Terminal Activity and Status View, Scrolled Right Again

For descriptions of the fields in the IUSTATZ view, see the online help. To display online field help, position the cursor on any field and press your help key.

You can use line commands in the IUSTATZ view to control terminal and user status (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to start or stop LTERMs and users. (The specific line commands for these actions are listed in the IUSTATZ view help and in Table 32 on page 190.)

The following hyperlinks are provided in the IUSTATZ view.

Hyperlink from	To see
LTERM Name	IUSTAT view, filtered on the selected LTERM
User Name	IUDETAIL view, where you can view all information available for a terminal or user
I/P Stat (Bad)	Status indicator fields (scrolled right) to locate the reason for the failed condition
O/P Stat (Bad)	Status indicator fields (scrolled right) to locate the reason for the failed condition
Last Trn/Ltrm	ITRSUMR view, where you can issue line commands against the transaction

Users/LTERMs/Nodes with Exceptions View

The Users/LTERMs/Nodes with Exceptions view (IUSEXCP), shown in Figures 155, 156, and 157, shows the status and output message activity of all users, terminals, and nodes that have an exception status.

You can quickly check status by looking at the input and output status summary fields and by evaluating information in the Last Trn/Ltrm field. You can use line commands to solve problems (if you have a license for MAINVIEW AutoOPERATOR for IMS).

For more information about how to use this view, see “Communication Activity and Status View” on page 192.

To display the IUSEXCP view, you can enter the view name on any IPSM command line. You can also hyperlink to the view from the IMS Operations Menu (EZIOPSR).

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IUSEXCP==========(ALL======*=======)22MAR2004==15:27:38====MVIMS====D====4
CMD LTERM    User     Signon   NodeName Enq   Que     I/P  O/P  Last     IMS  L
--- Name     Name     User ID  LinePtrm Cnt   Cnt Age Stat Stat Trn/Ltrm ID
    MSNS2                        10/  2     0   0   0 Bad  Bad           Y19H
    MSNS1                        10/  1     0   0   0 Bad  Bad           Y19H
    MSNI5                      SYSDVTAM     0   0   0 Bad  Bad           Y19H
    MSNI4                      ISAF         0   0   0 Bad  Bad           ISA
```

Figure 155. Users/LTERMs/Nodes with Exception Status View (IUSEXCP)

When an IMS is using shared message queues, the Age field displays a value of SMQ, indicating that the statistic is available only for local message queue environments.

If SMQ is displayed in the Que Cnt field, the ISQQUERY parameter in BBPARM member IMFBEX00 is preventing collection of message count data for IMS systems that are using shared message queues. When the ISQQUERY parameter is allowing collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, “Controlling Shared Message Queue Data Collection” on page 335.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IUSEXCP==========(ALL======*=======)22MAR2004==15:27:38====MVIMS====D====4
CMD LTERM         Loop Input N/L/P N/L/P  N/L/P  LTERM  LTERM  SPQB  SPQB   Pur
--- Name     Lckd Test Stopd Resp  Q Stp Out Stp Q Stp Out Stp Resp Out Stp -in
    MSNS2              Y                Y
    MSNS1              Y                Y
    MSNI5              Y                Y
    MSNI4              Y          Y     Y
```

Figure 156. Users/LTERMs/Nodes with Exception Status View, Scrolled Right

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IUSEXCP==========(ALL======*=======)22MAR2004==15:27:38====MVIMS====D====4
CMD LTERM    Purg Que   MVS
--- Name     -ing Error ID
    MSNS2               SJSC
    MSNS1               SJSC
    MSNI5               SJSC
    MSNI4               SJSC
```

Figure 157. Users/LTERMs/Nodes with Exception Status View, Scrolled Right Again

For descriptions of the fields in the IUSEXCP view, see the online help. To display online field help, position the cursor on any field and press your help key.

You can use line commands in the IUSEXCP view to control terminal and user status (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to start or stop LTERMs and users. (The specific line commands for these actions are listed in the IUSTATZ view help and in Table 32 on page 190.)

The following hyperlinks are provided in the IUSEXCP view.

Hyperlink from	To see
LTERM Name	IUMUSR menu, where you can get quick access to terminal and user information
User Name	IUDETAIL view, where you can view all information available for a terminal or user
I/P Stat	Status indicator fields (scrolled right) to locate the reason for the failed condition
O/P Stat	Status indicator fields (scrolled right) to locate the reason for the failed condition
Last Trn/Ltrm	ITRSUMR view, where you can issue line commands against the transaction

Communications Menu

The Communications Menu (IUMUSR), shown in Figure 158, is the easy menu for the terminal or user you select from a tabular view. The menu gives you quick access to terminal and user information.

You can hyperlink to the Communications Menu from the

- IUSTAT view by positioning the cursor in the LTERM Name field and pressing Enter
- IUDETAIL view by positioning the cursor in the User Name field and pressing Enter

The Communications Menu will be displayed, filtered on the terminal or user you selected.

```
22MAR2004  12:04:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IUMUSR============IMSxxx===*========22MAR2004==12:04:33====MVIMS====D====1
                              Communications Menu
                              Timeframe - Realtime

                  User ->   L1WA1007
             Signon ID ->
              LTERM ID ->   A1QGG01A
                IMS ID ->   Y71H
              MVS Name ->   SJSC

    Analysis                +----------------------+    System Wide Analysis
  . Input/Output Details    |   Place cursor on    |  . Input/Output Status
  . Devices w/"Bad" Status  |    menu item and     |  . User Information
                            |     press ENTER      |  . User Status
                            +----------------------+  . User Timestamp
                                                      . LTERM Status
                                                      . Node Status


    Work for this User                                  Tools and Menus
  . Executing in Regions                              > IMS Easy Menu
                                                      > IMS Fast Menu
                                                      . Return...
```

Figure 158. Communications Menu (IUMUSR)

To use the Communications Menu, position the cursor on any option of interest and press Enter. A view providing the information you requested will be displayed.

If you want to see the regions running a terminal's work, for example, you can hyperlink from the Executing in Regions option to a region view that shows just the regions that are currently running the terminal's work.

You can select Devices w/"Bad" Status to hyperlink to an IUSTAT view filtered to show only terminals and users with a Bad status. That way you can isolate and monitor terminals and users with input/output problems.

Accessing the User Status Views

You can display the user status views by entering the view name on the command line or by entering VIEWS and then selecting the view from the list provided.

You can hyperlink to the user status views from the

- Active Users option in the IMS Easy Menus (EZIMS and EZIMSR)
- Users option in the IMS Fast Menus (EZIFAST and EZIFASTR)

The EZIMS menu is shown in Figure 159.

```
22MAR2004 14:12:30 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIMS=============IMSxxx===*========22MAR2004=14:12:30====MVIMS====D====1
                                IMS EASY MENU
                              Timeframe - Interval

       (Change) Target--->  IMSxxx                     Status: INACTIVE
    Performance             +----------------------+    Resources
  . IMS System              |   Place cursor on    |  . Transactions
  . Processing by Class     |    menu item and     |  . Programs
  . Processing by BALG      |     press ENTER      |  . Databases
                            +----------------------+  . Areas

    Activity/Status           Exceptions                Cross Reference
  . Region Occupancy        . Current Delays          . Transactions/Programs
  . Region Activity         . Database Lock Waits     . Programs/Databases
  . Database Activity       . Waiting Regions         . Databases/Transactions
  . IMSplex Connection      . Alarms in Exception     . Databases/Programs
                            > Stopped Resources

    Communications            Transaction Analysis      Tools and Menus
  . Input Messages Queued   . Delay Factors           > Utilities
  . Output Messages Queued  . Components of Response  > IMS Fast Menu
  . Input/Output Status     . Traces                  > IMS Easy Ops Menu
  . Active Users                                      > IMS Easy DBA Menu
  . OTMA                      Monitors                > IMS SSI Menu
  . APPC                    . In Warning              > MVIMS Main Menu
                            . Active                  . Installed Products
                            . Workload Objective      . What's New?
                            . Area Summary            . Return...
```

Figure 159. EZIMS Easy Menu

To access the user views from the EZIMS menu, position the cursor on the Active Users option (under the communications section) and press Enter. When you select the Active Users option, the User Information view (IUSERI) is displayed.

User Information View

The User Information view (IUSERI), shown in Figure 160, displays summary information about IMS users, both static and dynamic, across multiple systems. It identifies the currently signed-on user. It also reports the name of any user for whom work (input or output messages) is queued, regardless of whether that user is currently signed on, which lets you know if work is pending for that user the next time the user signs on.

This view is a good place to start when users call in with a problem. It identifies which IMS the user is logged on to, and it shows the user's last transaction. It identifies the number of output messages put into the LTERM queue, as well as the number of messages remaining (unreceived) on the queue. That information can help you provide quick answers when users in response mode call in with a problem.

The IUSERI view identifies the LTERM associated with each user structure and indicates whether the user structure was dynamically created. It provides the node identification for VTAM users and the line number and physical terminal number for non-VTAM users.

You can hyperlink to the User Information view from the

- Active Users option in the IMS Easy Menus (EZIMS and EZIMSR)
- Users option in the IMS Fast Menus (EZIFAST and EZIFASTR).

```
22MAR2004  16:04:07 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
>W1 =IUSERI============IMSxxx===*========22MAR2004==14:14:53====MVIMS====D==390
CMD User     Signon   LTERM    NodeName Enq  Que     Last     Dy IMS      MVS
--- Name     User ID  Name     LinePtrm Cnt  Cnt Age Trn/Ltrm Cr ID       ID
    TMRTRN            TMRTRN              1   1   0          Y  Y19H     SJSC
    TMRSTN            TMRSTN              1   1   0          Y  Y19H     SJSC
    L1WC1008          C1QHH01A            0   0   0             Y19H     SJSC
    L1WA1I01          A1QAAI1A            0   0   0             Y71H     SJSC
    L1WA1001          A1QAAO1A            0   0   0             Y71H     SJSC
    L1WA1I02          A1QBBI1A            0   0   0             Y71H     SJSC
    L1WA1002          A1QBBO1A            0   0   0             Y71H     SJSC
    L1WA1I03          A1QCCI1A            0   0   0             Y71H     SJSC
    L1WA1003          A1QCCO1A            0   0   0             Y71H     SJSC
    L1WA1I04          A1QDDI1A            0   0   0             Y71H     SJSC
    L1WA1004          A1QDDO1A            0   0   0             Y71H     SJSC
    L1WA1I05          A1QEEI1A            0   0   0             Y71H     SJSC
```

Figure 160. User Information View (IUSERI)

When an IMS is using shared message queues, the Age field displays a value of SMQ, indicating that the statistic is available only for local message queue environments.

If SMQ is displayed in the Que Cnt field, the ISQQUERY parameter in BBPARM member IMFBEX00 is preventing collection of message count data for IMS systems using shared message queues. When the ISQQUERY parameter is allowing collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, "Controlling Shared Message Queue Data Collection" on page 335.

For descriptions of the fields in this view, see the online help. To display online help for a field, position the cursor on the field and press your help key.

You can control user status using line commands in IUSERI view (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to stop or start users and to start or stop LTERMs. (The specific line commands for these actions are listed in the IUSERI view help and in Table 32 on page 190.)

The following hyperlinks are provided in the IUSERI view.

Hyperlink from	**To see**
User Name	IUSRMR menu, where you can get quick access to terminal and user information
LTERM Name	IUDETAIL view, where you can view all information available for a terminal or user
NodeName LinePtrm	IUDETAIL view, where you can view all information available for a terminal or user
Last Trn/Ltrm	ITRSUMR view, where you can issue line commands against the transaction

User Structure Status View

The User Structure Status view (IUSERS) provides information about the status of the IMS user structure.

The view indicates whether a user structure is stopped, is in response mode, or has held a conversation. It also indicates the number of messages queued and the last transaction entered by the user.

The IUSERS view displays the user name and sign-on ID (which can be different from the user structure name for dynamic terminals) and the name of the user's associated LTERM, node, SSI target, and OS/390.

When you arrive at this view by hyperlinking from the User Status option in the IUSRMR or IUMUSR menus, the information is filtered on the user name you selected from a previous view. To see an unfiltered view, enter IUSERS on any IPSM command line.

An example User Structure Status view is shown in Figures 161 and 162.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IUSERS============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==390
CMD User     Signon   LTERM    Que Stop Conv Resp Last     Term   NodeName IMD
--- Name     User ID  Name     Cnt 4 Op Held Mode Trn/Ltrm Create LinePtrm ID
    LBUSR1            LBUSR2     1                         DYN             Y19H
    LBUSR3            LBUSR3     1                         DYN             Y19H
    L1WA1002          A1QBBO1A   0                         STATIC          Y71H
    L1WA1I03          A1QCCI1A   0                         STATIC          Y71H
    L1WA1003          A1QCCO1A   0                         STATIC          Y71H
    L1WA1I04          A1QDDI1A   0                         STATIC          Y71H
    L1WA1004          A1QDDO1A   0                         STATIC          Y71H
```

Figure 161. User Structure Status View (IUSERS)

If SMQ is displayed in the Que Cnt field, the ISQQUERY parameter in BBPARM member IMFBEX00 is preventing collection of message count data for IMS systems using shared message queues. When the ISQQUERY parameter is allowing collection of message count data for shared message queues, you can also use it to define the refresh rate for the data. For information about using the ISQQUERY parameter, see Chapter 23, "Controlling Shared Message Queue Data Collection" on page 335.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IUSERS============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==390
CMD User     IMS      MVS      IMS
--- Name     ID       ID       Jobname
    LBUSR1   Y19H     SJSC     IMSxxx
    LBUSR3   Y19H     SJSC     IMSxxx
    L1WA1002 Y19H     SJSC     IMSxxx
    L1WA1I03 Y19H     SJSC     IMSxxx
    L1WA1003 Y19H     SJSC     IMSxxx
    L1WA1I04 Y19H     SJSC     IMSxxx
    L1WA1004 Y19H     SJSC     IMSxxx
```

Figure 162. User Structure Status View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online help for a field, position the cursor on the field and press your help key.

You can use line commands in the IUSERS view to control user status (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to stop or start users and to start or stop LTERMs. (The specific line commands for these actions are listed in the IUSERS view help and in Table 32 on page 190.)

The following hyperlink is provided in the IUSERS view.

Hyperlink from	To see
User Name	IUSRMR menu, where you can get quick access to terminal and user information

User Structure Timestamp View

The User Structure Timestamp view (IUSERT), shown in Figure 163 and Figure 164, is available when you are running with IMS 6.1 or later. The view displays an IMS internal timestamp to indicate when the user structure was created and when the last transaction or LTERM message was enqueued.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IUSERT============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD User     Signon   User Creatio Last     Last Enq Trn LTERM    NodeName IMS
--- Name     User ID  Timestamp    Trn/Ltrm Timestamp    Name     LinePtrm ID
    LBUSR1            2000353F2054          000000000000 LBUSR1           Y71H
    L1WA1I01          0491032D0000          000000000000 A1QAAI1A         Y71H
    L1WA1I02          0493032D0000          000000000000 A1QBBI1A         Y71H
    L1WA1I03          0496032D0000          000000000000 A1QCCI1A         Y71H
    L1WA1I04          0498032D0000          000000000000 A1QDDI1A         Y71H
    L1WA1I05          0500032D0000          000000000000 A1QEEI1A         Y71H
```

Figure 163. User Structure Timestamp View (IUSERT)

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IUSERT============IMSxxx===*========22MAR2004==15:27:38====MVIMS====D==392
CMD User     IMS      MVS      IMS
--- Name     ID       ID       Jobname
    LBUSR    Y71H     SJSC     IMSxxx
    L1WA1I01 Y71H     SJSC     IMSxxx
    L1WA1I02 Y71H     SJSC     IMSxxx
    L1WA1I03 Y71H     SJSC     IMSxxx
    L1WA1I04 Y71H     SJSC     IMSxxx
    L1WA1I05 Y71H     SJSC     IMSxxx
```

Figure 164. User Structure Timestamp View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online help for a field, position the cursor on the field and press your help key.

You can use line commands in the IUSERT view to control user and terminal status (if you have a license for MAINVIEW AutoOPERATOR for IMS). You can use line commands to stop or start users and to start or stop LTERMs. (The specific line commands for these actions are listed in the IUSERT view help and in Table 32 on page 190.)

The following hyperlink is provided in the IUSERT view.

Hyperlink from	To see
User Name	IUSRMR menu, where you can get quick access to terminal and user information

User Related Menu

The User Related Menu (IUSRMR), shown in Figure 165, is a starting point for linking to specific user information.

When you hyperlink to the User Related Menu from a user or terminal entry in a tabular view, the menu is filtered on the entry you selected. You can hyperlink to IUSRMR menu from the

- User Name field in the IUSERI, IUSERS, and IUSERT views
- LTERM Name field in the IULTERM view
- NodeName LinePtrm field in the IUNODE view

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IUSERI===IUSRMR===IMSxxx===*========22MAR2004==13:03:43====MVIMS====D====1
                              User Related Menu
                            Timeframe - Realtime

                 User ->  L1WA1003
            Signon ID ->
             LTERM ID ->  A1QCC01A
               IMS ID ->  Y71H
             MVS Name ->  SJSC

  Detail Analysis         +----------------------+   System Wide Analysis
. Input/Output Details    |   Place cursor on    | . Input/Output Status
                          |    menu item and     | . User Information
                          |     press ENTER      | . User Status
                          +----------------------+ . User Timestamp
                                                   . LTERM Status
                                                   . Node Status


  Work by User                                       Tools and Menus
. Executing in Regions                              > IMS Easy Menu
                                                    > IMS Fast Menu
                                                    . Return...
```

Figure 165. User Related Menu (IUSRMR)

To use the User Related Menu, position the cursor on any option of interest and press Enter. A view providing the information you requested will be displayed.

If you want to see the region(s) running a user's work, for example, you can hyperlink from the Executing in Regions option to a region view that shows just the regions that are currently running the user's work.

Chapter 13. Monitoring OTMA Clients and Servers

This chapter describes the sysplex-enabled OTMA views, which you can use to examine the topology and status of IMS OTMA clients, servers, and the transactions they are running. These views help you quickly answer the following questions:

- Which clients (MQSeries, TCP/IP, and so on) are associated with which server?
- Which clients are ready to send and receive transaction messages?
- Which transactions are the IMS servers currently processing?
- Which resources are being used?

The OTMA views give you a sysplex-wide overview. They provide you with both summary and detail views. The views show you status and detail about IMS OTMA clients, servers, transactions, and resources. They show information about

- Connection status
- XCF status
- Conversations
- Number of TPIPES
- Number of messages enqueued
- TPIPE transaction
- Transaction origin

The following OTMA views are provided:

View name	Description
IOTMASUM	OTMA Client and Server Summary
ITPIPSUM	OTMA Group TPIPE Summary
ITPIPTRN	OTMA TPIPE Message Summary
IOTMATRN	OTMA Message
IOTMDTLR	OTMA Message Detail

Accessing the OTMA Views

You can display any of the OTMA views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting the view from the list displayed.

You can also access the views by hyperlinking from the OTMA option of the IMS Easy Menu (EZIMS) or the IMS Resource Menu (EZIMSRS).

Note: Relevant OTMA-related information (such as TPIPE name) is also displayed in other MVIMS views, such as regions and trace views. Users may want to use the information collected in those views as part of their analysis.

OTMA Client and Server Summary View

This section describes the OTMA Client and Server Summary view (IOTMASUM), which is shown in Figure 166 and Figure 167. This view is a good starting point for examining the status of clients and servers and the transactions they are running.

The IOTMASUM view displays information about every OTMA server and its clients. It shows OTMA connection status and XCF status for each member. For every member, it also shows the number of TPIPEs, messages enqueued, and conversations.

To display this view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the IMS Easy Menu (EZIMS).

```
22MAR2004  15:41:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IOTMASUM==========IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 OTMA                    OTMA             Connection               Num  Num
 Member Name      Type   Server Name      Status                   Msgs Tpipes
 CSQ3             Client IMSxxx           Accepting MSG traffic       2      1
 IMSxxx           Server *                Enabled                     2      1
```

Figure 166. OTMA Client and Server Summary View (IOTMASUM)

```
22MAR2004  15:42:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IOTMASUM==========IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 OTMA             Num    Sync Asyn OTMA     XCF    Secure IMS  Server
 Member Name      Tpipes Conv Conv Group    Status Level  ID   MVS name
 CSQ3                 1    0    0 IMFOTMA  Active        X19H SYSD
 IMSxxx               1    2    0 IMFOTMA  Active None   X19H SYSD
```

Figure 167. OTMA Client and Server Summary View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IOTMASUM view.

Hyperlink from	To see
Num Msgs	ITPIPTRN view, which provides a summarization by message name of all the messages associated with a specific TPIPE of a specific member (client or server) of an OTMA group
Num Tpipes	ITPIPSUM view, which provides TPIPE message information, summarized by TPIPE name

OTMA Group TPIPE Summary View

This section describes the OTMA Group TPIPE Summary view (ITPIPSUM), which is shown in Figure 168 and Figure 169.

The OTMA Group TPIPE Summary view shows you summarized TPIPE information for one or more members of single or multiple OTMA groups.

This view shows you each TPIPE name, started or stopped status, and both current and total number of messages enqueued to a server by a client. The view indicates whether the TPIPE is synchronized and whether it is traced. It also shows the XCF group name and member name, as well as the IMS ID and OS/390 name of the server.

To display this view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Num Tpipes field in the IOTMASUM view.

```
22MAR2004  15:43:06 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IOTMASUM=ITPIPSUM=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====1
 TPIPE       TPIPE      Num    TPIPE    TPIPE   OTMA     OTMA             IMS
 Name        Status     Msgs   Synced   Trace   Group    Member Name      ID
 CSQ80072    Started         2 Not Sync Off     IMFOTMA  CSQ3             X19H
```

Figure 168. OTMA Group TPIPE Summary View (ITPIPSUM)

```
22MAR2004  15:43:17 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IOTMASUM=ITPIPSUM=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====1
 TPIPE       IMS  Server
 Name        ID   MVS name
 CSQ80072    X19H SYSD
```

Figure 169. OTMA Group TPIPE Summary View, Scrolled Right

For descriptions of the fields in the ITPIPSUM view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the ITPIPSUM view.

Hyperlink from	To see
Num Msgs	ITPIPTRN view, which provides TPIPE transaction information

OTMA TPIPE Message Summary View

This section describes the OTMA TPIPE Message Summary view (ITPIPTRN), which is shown in Figure 170 and Figure 171.

The OTMA TPIPE Message Summary view shows you summarized TPIPE message information. It shows message name and status, and the associated TPIPE name. It also indicates the XCF group name and member name, and the IMS ID and OS/390 name of the server.

To display this view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Num Msgs field of the IOTMASUM or ITPIPSUM view.

```
 22MAR2004  15:43:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
 COMMAND  ===>                                                SCROLL ===> PAGE
 CURR WIN ===> 1        ALT WIN ===>
 >W1 =IOTMASUM=ITPIPTRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====1
  MSG      Msg        Num  Oldest Msg Newest Msg TPIPE    TPIPE    OTMA
  Name     Type       Msgs (Minutes)  (Minutes)  Name     Synced   Member Name
  GBGTRNM1 TRAN          2      14.34      13.85 CSQ80072 Not Sync CSQ3
```

Figure 170. OTMA TPIPE Message Summary View (ITPIPTRN)

```
22MAR2004  15:43:59 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
 COMMAND  ===>                                                SCROLL ===> PAGE
 CURR WIN ===> 1        ALT WIN ===>
 <W1 =IOTMASUM=ITPIPTRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====1
  MSG      OTMA             OTMA     IMS  MVS
  Name     Member Name      Group    ID   Name
  GBGTRNM1 CSQ3             IMFOTMA  X19H SYSD
```

Figure 171. OTMA TPIPE Message Summary View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ITPIPTRN view.

Hyperlink from	To see
Msg Name	ITRDTLR view, which provides detailed realtime information about this IMS transaction (if it is a transaction)
Num Msgs	IOTMATRN view, which provides unsummarized OTMA message information

OTMA Message View

This section describes the OTMA Message view (IOTMATRN), which is shown in Figure 172, Figure 173, Figure 174, Figure 175, and Figure 176.

The OTMA Message view shows you unsummarized OTMA message information. Each row represents a single message, which could be a transaction, an IMS command, a response, or data. It provides specific information about individual messages.

Information shown includes message type, name, and segments; age in minutes; date and time queued; send and recovery sequence numbers; sense and reason codes; transaction mode and map name; override LTERM, security level, and OTMA architecture level; member name, status, and type; client type, OTMA group, and server name; IMS ID, OS/390 name, and TPIPE name; whether TPIPE synchronized; commit mode, sync level, correlator ID, context ID, and server token.

When you identify the message you are interested in, you may want to hyperlink from that message name to the IOTMDTLR view. This allows you to examine the same information for a single message, without having to scroll right four times.

To display the IOTMATRN view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Num Msgs field of the ITPIPTRN view.

```
22MAR2004  15:44:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IOTMASUM=IOTMATRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 Msg      Message    Msg  Date      Time     SendSeq RecovSeq Client   OTMA
 Name     Type       Segm Queued    Queued   Number  Number   Type     Group
 GBGTRNM1 TRAN       SNGL 22MAR2004 23:24:12       1          MQSeries IMFOTMA
 GBGTRNM1 TRAN       SNGL 22MAR2004 23:24:41       2          MQSeries IMFOTMA
```

Figure 172. OTMA Message View (IOTMATRN)

```
22MAR2004  15:44:40 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IOTMASUM=IOTMATRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 Msg      OTMA     OTMA             TPIPE    TPIPE    Sense Reason Transact Com
 Name     Group    Member Name      Name     Synced   Code  Code   Mode     Mod
 GBGTRNM1 IMFOTMA  CSQ3             CSQ80072 Not Sync N/A   N/A    NON-CONV 1
 GBGTRNM1 IMFOTMA  CSQ3             CSQ80072 Not Sync N/A   N/A    NON-CONV 1
```

Figure 173. OTMA Message View, Scrolled Right

```
22MAR2004  15:45:17 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IOTMASUM=IOTMATRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 Msg      Commit Sync   Map      Server           Correlator
 Name     Mode   Level  Name     Token            ID
 GBGTRNM1 1      1                                7F5E703800000000B0106550E4144
 GBGTRNM1 1      1                                7F5E703800000000B010656C73838
```

Figure 174. OTMA Message View, Scrolled Right a Second Time

```
22MAR2004  15:45:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IOTMASUM=IOTMATRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 Msg      Correlator                       Context                          Ove
 Name     ID                               ID                               LTE
 GBGTRNM1 7F5E703800000000B0106550E4144C01
 GBGTRNM1 7F5E703800000000B010656C73838A02
```

Figure 175. OTMA Message View, Scrolled Right a Third Time

```
22MAR2004  15:45:50 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IOTMASUM=IOTMATRN=IMSxxx===*========22MAR2004==15:38:32====MVIMS====D====2
 Msg      Override Security Arc IMS  MVS
 Name     LTERM    Level    Lvl ID   Name
 GBGTRNM1          FULL       1 X19H SYSD
 GBGTRNM1          FULL       1 X19H SYSD
```

Figure 176. OTMA Message View, Scrolled Right a Fourth Time

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IOTMATRN view.

Hyperlink from	To see
Msg Name	IOTMDTLR view, which provides detailed information about a single message

OTMA Message Detail View

This section describes the OTMA Message Detail view (IOTMDTLR), which is shown in Figure 177.

The OTMA Message Detail view shows you specific, unsummarized OTMA message information about a single message, which could be a transaction, an IMS command, a response to IMS, or data.

Information is the same as that shown in the OTMA Message view. It includes message type, name, and segments; age in minutes; date and time queued; send and recovery sequence numbers; sense and reason codes; transaction mode and map name; override LTERM, security level, and OTMA architecture level; member name, status, and type; client type, OTMA group, and server name; IMS ID, OS/390 name, and TPIPE name; whether TPIPE sync'd; commit mode, sync level, correlator ID, context ID, and server token.

To display this view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Msg Name field of the IOTMATRN view.

```
22MAR2004  15:46:14 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IOTMDTLR==========IMSxxx===*========22MAR2004==15:46:14====MVIMS====D====1
 Msg Type........        TRAN    Member Name..                              CSQ3
 Msg Name........    GBGTRNM1    Member Status            Accepting MSG traffic
 Msg Segments....        SNGL    Member Type..                            Client
 Age in Minutes..        22.0    Client Type..                          MQSeries
 Date Queued.....   22MAR2004    OTMA Group...                           IMFOTMA
 Time Queued.....    23:24:12    Server Name..                            IMSxxx
 Send Seq Nbr....           1    IMS ID.......                              X19H
 Recovery Seq Nbr           0    MVS Name.....                              SYSD
 Sense Code......         N/A    TPIPE Name...                          CSQ80072
 Reason Code.....         N/A    TPIPE Synch'd                          Not Sync
 Transaction Mode    NON-CONV    Commit Mode..                 Send-then-Commit
 Map Name........                Sync Level...                     Synchronized
 Override LTERM..                Correlator ID 7F5E703800000000B0106550E4144C01
 Security Level..        FULL    Context ID...
 OTMA Arch Level.           1    Server Token.
```

Figure 177. OTMA Message Detail View (IOTMADTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Part 4. Managing IMS Operations

This section describes how you can use IPSM views to manage IMS operations. For general information about views, see the *Using MAINVIEW* manual.

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Chapter 14. Managing Fast Path DEDB Areas

This chapter describes the Fast Path area views. You can use the views to manage and control your IMS DEDB (data entry database) areas. These interactive views allow you to issue commands and see their results immediately.

With the Fast Path Area views, you can immediately access pertinent information about each of your 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 that DEDB area

The Fast Path Area views show you

- DEDB area structure and status
- Amount of space available
- EQE information
- Extensive CI statistics, broken down by category

After accessing the information you need, you can use line commands within the same view to control the Fast Path areas (if you have a license for MAINVIEW AutoOPERATOR for IMS).

The following Fast Path area views are provided:

View name	Description
IFPSUMR	Fast Path DEDB Area Overview
IFPDTLR	Fast Path DEDB Area Detail
IFPORGR	Fast Path DEDB Area Statistics
IFPSTAR	Fast Path DEDB Area Status
IFPMR	Fast Path Area Object Easy Menu

Accessing the Fast Path DEDB Area Views

You can display Fast Path area views by typing the view name on the command line or by typing VIEWS and then selecting the view from a list of views.

You can also hyperlink to the Fast Path area views from the following menus:

- IMS Easy Menu (EZIMS)
- IMS Fast Menu (EZIFAST)
- IMS Resource Menu (EZIMSRS)
- IMS Sysplex Easy Menu (EZISSI)

Fast Path DEDB Area Overview View

This section describes the Fast Path DEDB Area Overview view (IFPSUMR), which is shown in Figures 178 and 179. You can use this view to manage and control your IMS DEDB areas.

For each area, the IFPSUMR view shows the area name, current status, authorization state, access level, number of EQEs (error queue elements) used, DBD name, IMS ID, MVS name, IMS name, local and global DMB numbers, whether the area is defined as nonrecoverable, area type, and organization type.

You can use line commands in the IFPSUMR view to control your Fast Path DEDB areas (if you have a license for MAINVIEW AutoOPERATOR for IMS). To display the Fast Path DEDB Area Overview view, you can enter the view name (IFPSUMR) on any command line within IPSM.

```
22MAR2004  14:09:18 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFPSUMR===========IMSxxx===*========22MAR2004==14:05:42====MVIMS====D====2
 CM Area                       Auth     Access EQE  DBD      IMS  MVS  IMS
 -- Name     Status 1 Status 2 State    Level  Cnt  Name     ID   ID   Name
    CUSA01A  NOT-OPEN          NOT-AUTH EXCL        BBFDDB11 X17H SJSC IMSxxx
    CUSA010  NOT-OPEN          NOT-AUTH EXCL        BBFDDB01 X17H SJSC IMSxxx
```

Figure 178. Fast Path DEDB Area Overview View (IFPSUMR)

```
22MAR2004  14:05:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IFPSUMR===========IMSxxx===*========22MAR2004==14:05:42====MVIMS====D====2
 CM Area     IMS      Loca Glob Non-
 -- Name     Name     DMB# DMB# Recov Type Org
    CUSA01A  IMSxxx     11      N     DEDB VSAM
    CUSA010  IMSxxx      1      N     DEDB VSAM
```

Figure 179. Fast Path DEDB Area Overview View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IFPSUMR view.

Hyperlink from	To see
Area Name	IFPMR menu, where you can access additional information about the Fast Path DEDB area

Fast Path DEDB Area Detail View

This section describes the Fast Path DEDB Area Detail view (IFPDTLR), which is shown in Figure 180. With this view, you can analyze a specific IMS DEDB area.

The IFPDTLR view shows the area name, current status, authorization state, access level, local and global DMB numbers, number of EQEs (error queue elements) used, whether the area is defined as nonrecoverable, DBD name, area type, organization type, IMS ID, and IMS name. The view also shows

- 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

To display the Fast Path DEDB Area Detail view, you can type the view name (IFPDTLR) on any IPSM command line. You can also hyperlink to the view from the Area Object Easy Menu (IFPMR) or the Database Object Easy Menu (IDBMR).

```
22MAR2004  14:17:17 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IFPDTLR===========IMSxxx===*========22MAR2004==14:17:17====MVIMS====D====1
 Area Name....  CUSA010 DBD Name..... BBFDDB01 C/I Size............ 1024
 Status 1..... NOT-OPEN TYPE.........     DEDB Root CIs............   77
 Status 2.....          Organization.     VSAM IOVF CIs............
 Auth State... NOT-AUTH IMS ID.......     X17H IOVF CIs Available..
 Access level.     EXCL IMS Job Name.   IMSxxx IOVF CIs % Available
 Local DMB#...        1                        SDEP CIs............
 Global DMB#..                                 SDEP CIs Available..
 EEQE Count...                                 SDEP CIs % Available
 NonRecoverable       N                        Root CIs per UOW....    5
                                              Overflow CIs per UOW   10
```

Figure 180. Fast Path DEDB Area Detail View (IFPDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Fast Path DEDB Area Statistics View

This section describes the Fast Path DEDB Area Statistics view (IFPORGR), which is shown in Figures 181 and 182. You can access this view when you want to examine structure and space availability information for multiple DEDB areas.

For each area, the IFPORGR view shows the area name, the DBD name, IMS ID, MVS ID, IMS name, current status, area type, organization type, authorization state, and access level. The view also shows

- 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 use line commands in the IFPORGR view to control your Fast Path DEDB areas (if you have a license for MAINVIEW AutoOPERATOR for IMS). To display the Fast Path DEDB Area Statistics view, you can type the view name (IFPORGR) on any IPSM command line. You can also hyperlink to this view from the Area Object Easy Menu (IFPMR).

```
22MAR2004  14:13:51 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IFPORGR===========IMSxxx===*========22MAR2004==14:13:51====MVIMS====D====2
CM Area     C/I  Root +--- IOVF --+ +--- SDEP --+ R-CI O-CI DBD      IMS  MVS
-- Name     Size C/Is C/Is Aval %Av C/Is Aval %Av /UOW /UOW Name     ID   ID
   CUSA01A  1024   77                                 5   10 BBFDDB11 X17H SJSC
   CUSA010  1024   77                                 5   10 BBFDDB01 X17H SJSC
```

Figure 181. Fast Path DEDB Area Statistics View (IFPORGR)

```
22MAR2004  14:14:08 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IFPORGR===========IMSxxx===*========22MAR2004==14:13:51====MVIMS====D====2
CM Area     MVS   IMS                                 Auth     Access
-- Name     ID    Name     Status 1 Status 2 Type Org  State    Level
   CUSA01A  SJSC  IMSxxx   NOT-OPEN          DEDB VSAM NOT-AUTH EXCL
   CUSA010  SJSC  IMSxxx   NOT-OPEN          DEDB VSAM NOT-AUTH EXCL
```

Figure 182. Fast Path DEDB Area Statistics View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IFPORGR view.

Hyperlink from	To see
Area Name	IFPMR menu, where you can access additional information about the selected area

Fast Path DEDB Area Status View

This section describes the Fast Path DEDB Area Status view (IFPSTAR), shown in Figure 183. You can access this view when you want to examine or modify the status of Fast Path DEDB areas.

The Fast Path DEDB Area Status 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, and it shows IMS ID and IMS name.

You can use line commands in the IFPSTAR view to control Fast Path DEDB areas (if you have a license for MAINVIEW AutoOPERATOR for IMS). To display the Fast Path DEDB Area Status view, you can type the view name (IFPSTAR) on any IPSM command line. You can also hyperlink to the view from the Area Object Easy Menu (IFPMR).

```
22MAR2004  14:16:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IFPSTAR===========IMSxxx===*========22MAR2004==14:16:38====MVIMS====D====1
CM                   Area  IMS  IMS
-- Status 1 Status 2 Count ID   Name
   NOT-OPEN              1 X17H IMSxxx
   STOPPED               2 X17H IMSxxx
```

Figure 183. Fast Path DEDB Area Status View (IFPSTAR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IFPSTAR view.

Hyperlink from	To see
Area Count	IFPSUMR view, which provides additional information about the selected areas

Fast Path DEDB Area Object Easy Menu

This section describes the Fast Path DEDB Area Object Easy Menu (IFPMR), which is shown in Figure 184. This menu gives you quick access to Fast Path DEDB Area information.

You can use this 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)

```
22MAR2004  14:12:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                  SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IFPMR=============IMSxxx===*========22MAR2004==14:12:09====MVIMS====D====1
                             Area Object Menu
                             Timeframe - Realtime
           FP Area Name -> CUSA010
                 IMS ID -> X17H
               IMS Name -> IMSxxx
    Related View             Filtering                Tools and Menus
  . Detail                 . EQE > 0                > IMS Easy Menu
  . Areas Organization     . Read Error             > IMS Fast Menu
                           . Write Error            . Return...
    Categories             . Locked
  . Summarized by Status   . Stopped
```

Figure 184. Fast Path DEDB Area Object Easy Menu (IFPMR)

To use the Area Object Easy Menu, position the cursor on any option that interests you and press Enter.

You can hyperlink to the Fast Path DEDB Area Object Easy Menu from the Area Name field in the IFPSUMR and IFPORGR views. You can also display the menu by typing IFPMR on any command line.

Chapter 15. Managing Databases

This chapter discusses the database views, which you can to manage and control IMS databases by issuing commands and seeing immediate results.

With the views, you can

- See 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

Statistics include access and organization type, authorization state, access level, local and global DMB numbers, current status, and whether the database is defined as nonrecoverable.

With the database views, you can immediately access pertinent information about each of your IMS databases, which can help you better manage the databases and the programs and transactions that are sensitive to them.

The following database views and Easy Menu are provided:

View name	Description
IDBSUMR	Database Overview
IDBDTLR	Database Detail
IDBTYPR	Database Type Summary
IDBSTAR	Database Status Summary
IDBSUMZ	Summarized Database Overview
IDBEXCP	Databases with Exceptions
IDBMR	Database Object Easy Menu

Accessing the Database Views

You can display the database views by entering the view name on the command line or by entering VIEWS and then selecting the view from a list of views.

You can also hyperlink to database views from the following menus:

- IMS Easy Menu (EZIMS)
- IMS Fast Menu (EZIFAST)
- IMS Resource Menu (EZIMSRS)
- IMS Sysplex Easy Menu (EZISSI)
- IMS Operations Menu (EZIOPSR)
- IMS DBA Easy Menus (EZIDBA and EZIDBAR)

Database Overview View

This section describes the Database Overview view (IDBSUMR), which is shown in Figures 185 and 186. You can use this view to manage and control your IMS databases.

This tabular view displays a scrollable list of all databases in the IMS systems and provides database-level statistics for each of the databases.

The view shows the DBD name or the High Availability Large Database (HALDB) partition name, IMS ID, database and organization type, current status, authorization state, access level, local and global DMB numbers, EEQE count, whether the database is defined as nonrecoverable, and IMS name.

After accessing the information you need, you can use line commands to control the databases in the view (if you have a license for MAINVIEW AutoOPERATOR for IMS).

To display the Database Overview view, you can enter IDBSUMR on any IPSM command line.

```
22MAR2004  13:48:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDBSUMR===========IMSxxx===*========22MAR2004==11:54:32====MVIMS====D===94
CM DBD/PART IMS  Database                        Auth     Access Loca Glob EEQE
-- Name     ID   Type     Org  Status 1 Status 2 State    Level  DMB# DMB# Cnt
   BE2PCUST H81H               NOT-OPEN          NOT-AUTH EXCL    108
   BE3ORDER H81H               NOT-OPEN          NOT-AUTH EXCL    109
   BE3ORDRX H81H               NOT-OPEN          NOT-AUTH EXCL    110
   BE3PARTS H81H               NOT-OPEN          NOT-AUTH EXCL    111
   BE3PSID1 H81H               NOT-OPEN          NOT-AUTH EXCL    112
   CSQ4CA   H81H               NOT-OPEN          NOT-AUTH EXCL    115
   CUSTHDAM H81H HDAM     OSAM OPENED            UPDT-SHR UPDT    116   11
   CUSTHIDM H81H               NOT-OPEN          NOT-AUTH UPDT    117
   CUSTHISM H81H               NOT-OPEN          NOT-AUTH UPDT    118
   CUSTINDX H81H               NOT-OPEN          NOT-AUTH UPDT    119
   CUSTVSAM H81H               NOT-OPEN          NOT-AUTH UPDT    120
   DBFSAMD1 H81H MSDB          OPENED            NOT-AUTH EXCL    121
   DBFSAMD2 H81H MSDB          OPENED            NOT-AUTH EXCL    122
   DBFSAMD3 H81H DEDB     VSAM NOT-OPEN          N/A      UPDT    123
   DBFSAMD4 H81H               NOT-OPEN          NOT-AUTH UPDT    124
   DB1      H81H               NOT-OPEN          NOT-AUTH UPDT    125
   DB1H     H81H PHIDAM        STOPPED  NOT-OPEN N/A      UPDT    126
   DB1HSX   H81H PSINDEX       STOPPED  NOT-OPEN N/A      UPDT    127
```

Figure 185. Database Overview View (IDBSUMR)

```
22MAR2004  13:52:51 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDBSUMR===========IMSxxx===*========22MAR2004==11:54:32====MVIMS====D===94
CM DBD/PART EEQE Non   IMS
-- Name     Cnt  Recov Name
   BE2PCUST      N/A   IMSxxx
   BE3ORDER      N/A   IMSxxx
   BE3ORDRX      N/A   IMSxxx
   BE3PARTS      N/A   IMSxxx
   BE3PSID1      N/A   IMSxxx
   CSQ4CA        N/A   IMSxxx
   CUSTHDAM      N     IMSxxx
   CUSTHIDM      N/A   IMSxxx
   CUSTHISM      N/A   IMSxxx
   CUSTINDX      N/A   IMSxxx
   CUSTVSAM      N/A   IMSxxx
   DBFSAMD1      N/A   IMSxxx
   DBFSAMD2      N/A   IMSxxx
   DBFSAMD3      N/A   IMSxxx
   DBFSAMD4      N/A   IMSxxx
   DB1           N/A   IMSxxx
   DB1H          N/A   IMSxxx
   DB1HSX        N/A   IMSxxx
```

Figure 186. Database Overview View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDBSUMR view.

Hyperlink from	To see
DBD/PART Name	IDBMR menu, where you can access more information about the database you selected
Status 1	IDBSUMR view, filtered to show all databases with the same status as the selected status
Status 2	IDBSUMR view, filtered to show all databases with the same status as the selected status
Auth State	IDBSUMR view, filtered to show all databases with the same authorization state as the selected authorization state
Access Level	IDBSUMR view, filtered to show all databases with the same access level as the selected access level

Database Detail View

The Database Detail view (IDBDTLR), shown in Figure 187, provides detailed statistics about a selected IMS database.

This view shows database name, IMS ID and name, access and organization type, local and global DMB numbers, current status, authorization state, access level, whether the database is defined as nonrecoverable, and the EEQE count against the database.

To display the Database Detail view, you can enter IDBDTLR on any IPSM command line. You can also hyperlink to this view from the Database Object Easy Menu (IDBMR).

```
22MAR2004  13:57:58 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDBDTLR===========IMSxxx===*========22MAR2004==13:57:58====MVIMS====D====1
 Database name. DBFSAMD3 Status 1...... NOT-OPEN EEQE Countn..
 IMS ID........     H81H Status 2......
 IMS Job Name..   IMSxxx Auth state....      N/A
 Type..........     DEDB Access Level..     UPDT
 Organization..     VSAM NonRecoverable      N/A
 Local DMB #...      123
 Global DMB #..
```

Figure 187. Database Detail View (IDBDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Database Type Summary View

This section describes the Database Type Summary view (IDBTYPR), which is shown in Figure 188. You can use this view to examine database access type information in a tabular format. You can use line commands in the view to control your IMS databases (if you have a license for MAINVIEW AutoOPERATOR for IMS).

This view summarizes databases by type of DBD access method and by IMS ID. It provides a count of the DBDs in each access method category. (When there is no value in the Type field, the associated database has been generated but does not have a member in ACBLIB, and it has a Status 2 of NOT-INIT.)

The view provides two levels of information about current status. The value in the Status 1 field indicates whether a database is open, not open, stopped, or locked. The value in the Status 2 field indicates error or failure conditions for the database. The view also shows organization type and associated IMS.

To display the Database Type Summary view, you can enter IDBTYPR on the command line.

```
22MAR2004  11:59:44 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDBTYPR===========IMSxxx===*========22MAR2004==11:59:44====MVIMS====D====6
CM                                      IMS      IMS
-- Type     Org  Count Status 1 Status 2 Name     ID
                   61 STOPPED  NOT-INIT IMSxxx   H81H
   DEDB     VSAM     2 NOT-OPEN          IMSxxx   H81H
   MSDB              3 OPENED            IMSxxx   H81H
   PART     OSAM     2 OPENED            IMSxxx   H81H
   PHDAM              5 STOPPED  NOT-OPEN IMSxxx   H81H
   PHIDAM   OSAM     1 OPENED            IMSxxx   H81H
```

Figure 188. Database Type Summary View (IDBTYPR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDBTYPR view.

Hyperlink from	To see
Count	IDBSUMR view, which shows all the databases that have the type of access method you selected

Database Status Summary View

This section describes the Database Status Summary view (IDBSTAR), which is shown in Figure 189. You can use this view to examine database status information in a tabular format. You can use line commands in the view to control your IMS databases (if you have a license for MAINVIEW AutoOPERATOR for IMS).

The Database Status Summary view summarizes all databases in the IMS systems 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.)

To display the Database Status Summary view, you can enter IDBSTAR on the command line.

```
22MAR2004  12:02:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDBSTAR===========IMSxxx===*========22MAR2004==12:01:15====MVIMS====D====4
CM                  Number IMS      IMS
-- Status 1 Status 2 of DB  Name     ID
   NOT-OPEN              22 IMSxxx   H81H
   OPENED                 6 IMSxxx   H81H
   STOPPED  NOT-OPEN      5 IMSxxx   H81H
   STOPPED  NOT-INIT     61 IMSxxx   H81H
```

Figure 189. Database Status Summary View (IDBSTAR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDBSTAR view.

Hyperlink from	To see
Number of DB	IDBSUMR view, which shows all the databases with the status you selected

Summarized Database Overview View

The Summarized Database Overview view (IDBSUMZ), shown in Figures 190 and 191, displays a scrollable list of all databases in the IMS systems and provides database-level statistics for each of the databases.

The view shows the DBD name or the High Availability Large Database (HALDB) partition name, IMS ID, database and organization type, current status, authorization state, access level, local and global DMB numbers, EEQE count, whether the database is defined as nonrecoverable, and IMS name.

You can use this view to manage and control IMS databases that are defined on a single IMS system or on multiple IMS systems. You can also use the view to issue commands and see immediate results (if you have a license for MAINVIEW AutoOPERATOR for IMS).

A database that is present in multiple IMS systems 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 systems.

To display the IDBSUMZ view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Databases option in the IMS Operations Menu (EZIOPSR).

```
22MAR2004  13:41:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDBSUMZ===========IMSxxx===*========22MAR2004==13:40:50====MVIMS====D==200
CM DBD/PART IMS  Database                        Auth     Access Loca Glob EEQE
-- Name     ID   Type     Org  Status 1 Status 2 State    Level  DMB# DMB# Cnt
   BE2PARTS I8A                STOPPED  NOT-INIT NOT-AUTH EXCL    107
   BE2PCUST I8A  HISAM    VSAM NOT-OPEN ALLOC-F  NOT-REG  EXCL    108
   BE3ORDRX I8A  INDX     VSAM NOT-OPEN ALLOC-F  NOT-AUTH EXCL    110
   BOOOUT01 I8A                STOPPED  NOT-INIT NOT-AUTH EXCL    114
   CSQ4CA   I8A                NOT-OPEN          NOT-AUTH EXCL    115
   CUSTHDAM I8A  HDAM     OSAM OPENED            UPDT-EXC UPDT    116   11
   CUSTHIDM I8A  HIDAM    OSAM NOT-OPEN          UPDT-EXC UPDT    117   12
   CUSTINDX I8A  INDX     VSAM NOT-OPEN          UPDT-EXC UPDT    119   13
   CUSTVSAM I8A                NOT-OPEN          NOT-AUTH UPDT    120
   DBFSAMD1 I8A  MSDB          OPENED            NOT-AUTH EXCL    121
   DBFSAMD3 I8A  DEDB     VSAM NOT-OPEN          N/A      UPDT    123
   DB1H     I8A  PHIDAM   OSAM STOPPED           N/A      UPDT    127
   DB1HSX   I8A  PSINDEX  VSAM STOPPED           N/A      UPDT    128
   DDLTDBD  I8A  HISAM    VSAM NOT-OPEN          NOT-AUTH UPDT    130
   DI21PART I8A  HISAM    VSAM OPENED            UPDT-EXC UPDT    131    7
```

Figure 190. Summarized Database Overview View (IDBSUMZ)

```
22MAR2004  13:41:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                  SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDBSUMZ===========IMSxxx===*========22MAR2004==13:40:50====MVIMS====D==200
CM DBD/PART EEQE Non-  IMS
-- Name     Cnt  Recov Name
   BE2PARTS      N     I8A332CT
   BE2PCUST      N     I8A332CT
   BE3ORDRX      N     I8A332CT
   B000UT01      N     I8A332CT
   CSQ4CA        N     I8A332CT
   CUSTHDAM      N     I8A332CT
   CUSTHIDM      N     I8A332CT
   CUSTINDX      N     I8A332CT
   CUSTVSAM      N     I8A332CT
   DBFSAMD1      N     I8A332CT
   DBFSAMD3      N     I8A332CT
   DB1H          N     I8A332CT
   DB1HSX        N     I8A332CT
   DDLTDBD       N     I8A332CT
   DI21PART      N     I8A332CT
```

Figure 191. Summarized Database Overview View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDBSUMZ view.

Hyperlink from	To see
DBD/PART Name	IDBSUMR view, filtered to show only the selected database
Status 1	IDBSUMR view, filtered to show all databases with the same status as the selected status
Status 2	IDBSUMR view, filtered to show all databases with the same status as the selected status
Auth State	IDBSUMR view, filtered to show all databases with the same authorization state as the selected authorization state
Access Level	IDBSUMR view, filtered to show all databases with the same access level as the selected access level

Databases with Exceptions View

The Databases with Exceptions view (IDBEXCP), shown in Figures 192 and 193, shows operational IMS 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.

The IDBEXCP view shows the DBD name or the High Availability Large Database (HALDB) partition name, IMS ID, database and organization type, current status, authorization state, access level, local and global DMB numbers, EEQE count, whether the database is defined as nonrecoverable, and IMS name.

You can use the view to manage and control the databases by issuing commands and seeing immediate results (if you have a license for MAINVIEW AutoOPERATOR for IMS).

To display the Databases with Exception view, you can enter IDBEXCP on any IPSM command line. You can also hyperlink to this view from the IMS Operations Menu (EZIOPSR) and from the IMS DBA Easy Menus (EZIDBA and EZIDBAR).

```
22MAR2004  12:02:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDBEXCP===========IMSxxx===*========22MAR2004==12:01:15====MVIMS====D====4
CM DBD/PART IMS  Database                       Auth     Access Loca Glob EEQE
-- Name     ID   Type     Org  Status 1 Status 2 State    Level  DMB# DMB# Cnt
   BE2PCUST I8A  HISAM    VSAM NOT-OPEN ALLOC-F  NOT-REG  EXCL    108
   BE3ORDER I8A  HIDAM    VSAM STOPPED  ALLOC-F  NOT-AUTH EXCL    109
   IN01A01  I8A  HIDAM    OSAM STOPPED  ALLOC-F  NOT-AUTH EXCL    347
   IN01A02  I8A  INDX     VSAM STOPPED  ALLOC-F  NOT-AUTH EXCL    348
```

Figure 192. Database with Exceptions View (IDBEXCP)

```
22MAR2004  12:02:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDBEXCP===========IMSxxx===*========22MAR2004==12:01:15====MVIMS====D====4
CM DBD/PART EEQE Non-  IMS
-- Name     Cnt  Recov Name
   BE2PCUST      N/A   I8A332CT
   BE3ORDER      N/A   I8A332CT
   IN01A01       N/A   I8A332CT
   IN01A02       N/A   I8A332CT
```

Figure 193. Database with Exceptions View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDBEXCP view.

Hyperlink from	To see
DBD/PART Name	IDBMR menu, where you can access more information about the selected database
Status 1	IDBSUMR view, filtered to show all databases with the same status as the selected status
Status 2	IDBSUMR view, filtered to show all databases with the same status as the selected status
Auth State	IDBSUMR view, filtered to show all databases with the same authorization state as the selected authorization state
Access Level	IDBSUMR view, filtered to show all databases with the same access level as the selected access level

Database Object Easy Menu

This section describes the Database Object Easy Menu (IDBMR), which is shown in Figure 194. This menu gives you quick access to information about a specific database in your IMS.

You can use this menu to

- Hyperlink to Database Detail, Status, or Type Summary views
- Hyperlink to related area, program, or transaction information
- Hyperlink to the IMS Easy Menu (EZIMS) or IMS Fast Menu (EZIFAST)
- Filter database information on
  - EEQE count (extended error queue element)
  - read or write error
  - locked or stopped status

```
 22MAR2004  13:55:04 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDBMR=============IMSxxx===*========22MAR2004==13:54:59====MVIMS====D====1
                              Database Object Menu
                              Timeframe - Realtime
          Database Name ->  DBUFSAMD3
                 IMS ID ->  H81H
               IMS Name ->  IMSxxx
    Related Resources         Filtering                 Tools and Menus
  . Detail                  . EEQE > 0                > IMS Easy Menu
  . Associated areas        . Read Error              > IMS Fast Menu
  . Associated Program      . Write Error             . Return...
  . Associated Trans        . Locked
                            . Stopped
    Categories
  . Type
  . Status
```

Figure 194. Database Object Easy Menu (IDBMR)

To use the Database Object Easy Menu, position the cursor on any option that interests you and press Enter.

To display the Database Object Easy Menu, you can enter IDBMR on any IPSM command line. You can hyperlink to the IDBMR menu from the DBD/PART Name field in the IDBSUMR view.

Chapter 16. Managing Application Programs

This chapter describes the program views, which you can use to find out

- How well application programs are running
- What the impact will be if you change the status of a particular program

With the program views, you can find out the transactions and databases associated with any program—and you can see their status, which helps you understand what the impact will be if you change the status of a particular program.

The program views show you

- 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

After identifying the information you need, you can use line commands within the same view to control the programs defined for your IMS (if you have a license for MAINVIEW AutoOPERATOR for IMS).

The following program views and Easy Menu are provided:

View name	Description
IPGSUMR	Program Overview
IPGTYPR	Program Count by Type
IPGSTAR	Program Count by Type and Status
IPGSUMZ	Summarized Program Overview
IPGEXCP	Programs with Exceptions
IPGMR	Program Object Menu

Accessing the Program Views

You can display any of the program views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting the view from the list displayed.

You can also hyperlink to program views from the following menus:

- IMS Easy Menu (EZIMS)
- IMS Fast Menu (EZIFAST)
- IMS Resource Menu (EZIMSRS)
- IMS Sysplex Easy Menu (EZISSI)
- IMS Operations Menu (EZIOPSR)
- IMS DBA Easy Menus (EZIDBA and EZIDBAR)

Program Overview View

The Program Overview view (IPGSUMR), shown in Figure 195, lists all IMS application programs by name. It identifies their type, status, and scheduling type. It also provides the related IMS ID and OS/390 name.

You can use line commands in the IPGSUMR view to control the programs defined for your IMS (if you have a license for MAINVIEW AutoOPERATOR for IMS).

To display this high-level view, you can enter the view name (IPGSUMR) on any IPSM command line. You can also hyperlink to this view from the Programs option in the IMS Easy Menu (EZIMS) or the IMS Resource Menu (EZIMSRS).

```
22MAR2004  13:41:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPGSUMR===========IMSxxx===*========22MAR2004==13:40:50====MVIMS====D==200
CMD Program  Type Status           IMS      MVS      Sched
--- Name                           Id       Name     Type
    APPC02   TP   Started          X17H     SYSC     Serial
    APPC03   TP   Started          X17H     SYSC     Serial
    APPC04   TP   Started          X17H     SYSC     Serial
    APPC05   TP   Started          X17H     SYSC     Serial
    APPC06   TP   Started          X17H     SYSC     Serial
    BBFPGM01 FP N Started          X17H     SYSC     Serial
    BBFPGM02 FP N Started          X17H     SYSC     Serial
```

Figure 195. Program Overview View (IPGSUMR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPGSUMR view.

Hyperlink from	To see
Program Name	IPGMR menu, where you can get quick access to views for examining and managing the selected program

Program Count by Type View

The Program Count by Type view (IPGTYPR), shown in Figure 196, provides a quick way to see all programs of a specific type.

This view summarizes all IMS application programs by type. The view also identifies the count of all programs in each type and shows the associated IMS name, IMS ID, and OS/390 name.

You can use line commands in the IPGTYPR view (and the other program views) to control the programs defined for your IMS (if you have a license for MAINVIEW AutoOPERATOR for IMS.)

To display this summarized view, enter the view name (IPGTYPR) on any IPSM command line.

```
22MAR2004  13:46:05 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPGTYPR===========IMSxxx===*========22MAR2004==13:46:05====MVIMS====D====4
CMD Type       IMS      IMS  MVS
---      Count Name     Id   Name
    BMP     74 IMSxxx   X18H SYSC
    FP N    66 IMSxxx   X18H SYSC
    FP U     1 IMSxxx   X18H SYSC
    TP      61 IMSxxx   X18H SYSC
```

Figure 196. Program Count by Type View (IPGTYPR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPGTYPR view.

Hyperlink from	To see
Count	IPGSUMR view, filtered on all programs of the same type

Program Count by Type and Status View

The Program Count by Type and Status view (IPGSTAR), shown in Figure 197, provides a quick way to see all programs of a specific type and status.

This view summarizes all IMS application programs by type and status. The view also shows the count of all programs having both the same type and status.

You can use line commands in the IPGTYPR view (and the other program views) to control the programs defined for your IMS (if you have a license for MAINVIEW AutoOPERATOR for IMS.)

To display the Program Count by Type and Status view, enter the view name (IPGSTAR) on any IPSM command line.

```
22MAR2004  13:45:19 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPGSTAR===========IMSxxx===*========22MAR2004==13:45:19====MVIMS====D===14
CMD                              IMS  IMS
--- Status           Type Count Id   Name
    Not initialized  BMP     41 I8A  I8A332CT
    Not initialized  BMP     41 I8B  I8B332CT
    Not initialized  TP      32 I8B  I8B332CT
    Not initialized  FP N    10 I8A  I8A332CT
    Not initialized  FP N    10 I8B  I8B332CT
    Not initialized  TP      32 I8A  I8A332CT
    Started          FP N     4 I8B  I8B332CT
    Started          TP      49 I8B  I8B332CT
    Started          FP U     1 I8A  I8A332CT
    Started          FP U     1 I8B  I8B332CT
    Started          BMP     47 I8B  I8B332CT
    Started          FP N     4 I8A  I8A332CT
    Started          BMP     47 I8A  I8A332CT
    Started          TP      49 I8A  I8A332CT
```

Figure 197. Program Count by Type and Status View (IPGSTAR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPGSTAR view.

Hyperlink from	To see
Count	IPGSUMR view, filtered on all programs of the same type and status

Summarized Program Overview View

The Summarized Program Overview view (IPGSUMZ), shown in Figure 198, lists all IMS application programs by name. It identifies their type, status, and scheduling type.

You can use this view to manage and control IMS programs that are defined on a single IMS system or on multiple IMS systems. You can also use the view to issue commands and see immediate results (if you have a license for MAINVIEW AutoOPERATOR for IMS).

A program that is present in multiple IMS systems 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 systems.

To display the IPGSUMZ view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Programs option in the IMS Operations Menu (EZIOPSR).

```
22MAR2004  13:41:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPGSUMZ===========IMSxxx===*========22MAR2004==13:40:50====MVIMS====D==200
CMD Program  IMS      Type Status           MVS      Sched
--- Name     Id                             Name     Type
    ALLPSBF1 X71H     TP   Started          SJSC     Parallel
    APPCOUT  X71H     TP   Started          SJSC     Parallel
    APPC02   X71H     TP   Started          SJSC     Parallel
    APPC03   X71H     TP   Started          SJSC     Parallel
    APPC04   X71H     TP   Started          SJSC     Parallel
    APPC05   X71H     TP   Started          SJSC     Parallel
    APPC06   X71H     TP   Started          SJSC     Parallel
    BARPSBB1 X71H     BMP  Not initialized  SJSC     Parallel
    BARPSBB2 X71H     BMP  Not initialized  SJSC     Parallel
    BARPSBB3 X71H     BMP  Not initialized  SJSC     Parallel
    BARPSBF1 X71H     FP M Not initialized  SJSC     Parallel
    BARPSBM1 X71H     TP   Not initialized  SJSC     Parallel
    BARPSBM2 X71H     TP   Not initialized  SJSC     Parallel
```

Figure 198. Summarized Program Overview View (IPGSUMZ)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPGSUMZ view.

Hyperlink from	To see
Program Name	IPGSUMR view, filtered on all programs of the same type

Programs with Exceptions View

The Programs with Exceptions view (IPGEXCP), shown in Figure 199, 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 use the IPGEXCP view to manage and control the programs by issuing commands and seeing immediate results (if you have a license for MAINVIEW AutoOPERATOR for IMS).

To display the IPGEXCP view, you can enter the view name on any IPSM command line. You can also hyperlink to this view from the Program option (in the Resource Exceptions category) in the IMS Operations Menu (EZIOPSR).

```
22MAR2004  13:41:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPGEXCP===========IMSxxx===*========22MAR2004==13:40:50====MVIMS====D==200
CMD Program  Type Status           IMS      MVS      Sched
--- Name                           Id       Name     Type
    DFSIVP1  TP   Stopped          I8A      SJSC     Serial
```

Figure 199. Programs with Exceptions View (IPGEXCP)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPGEXCP view.

Hyperlink from	To see
Program Name	IPGMR menu, where you can get quick access to views for examining and managing the selected program

Program Object Easy Menu

The Program Object Easy Menu (IPGMR), shown in Figure 200, provides a good starting point for examining how application programs are running.

By hyperlinking from the menu, you can go straight to the statistics you need to better manage the programs running in your IMS sysplex environment. The Program Object Easy Menu allows you to select options that take you to views showing

- Program information filtered by type or by started/not started status
- Program summarization by type or by type and status
- Transactions affected if you change a program's status
- Regions currently running a specific program

You can also hyperlink to the IMS Easy and Fast Menus (EZIMS and EZIFAST).

```
22MAR2004  13:43:12 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPGMR=============IMSxxx===*========22MAR2004==13:43:06====MVIMS====D====1
                             Program Object Menu
                             Timeframe - Realtime

           Program Name ->  APPC02
                 IMS ID ->  X17H
                MVS Name ->  SJSC

    Related Resources       +----------------------+    System Wide Analysis
  . Regions running...      |   Place cursor on    |  . Program/Tran
  . Associated databases    |    menu item and     |  . Region/Program
  . Associated Trans        |     press ENTER      |
                            +----------------------+

    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                                         . Return...
  . FP U Only
  . Started Programs
  . Not started Programs
```

Figure 200. Program Object Easy Menu

To use the Program Object Easy Menu, position the cursor on any option that interests you and press Enter.

To display the Program Object Easy Menu, you can hyperlink to it from the program name field in the IPGSUMR view. You can also enter IPGMR on the command line, or enter VIEWS and then select IPGMR from the list displayed.

Chapter 17. Cross-Referencing IMS Resources

This chapter discusses the cross-reference views. System programmers, DBAs, and application programmers can pick their point of entry into the views. Using their preferred point of entry (database, transaction, or program), they can conveniently cross-reference resources to

- Investigate issues like data unavailability
- Assess beforehand the impact of actions against IMS resources

The cross-reference views allow you to discover the association between transactions, programs, and databases. For example, if a database is unavailable, you can easily discover the cause—the problem may be with the database, a program that uses the database, or a transaction that the associated program processes.

With cross-reference views, you can manage transactions and programs as they relate to a database, and you can conveniently hyperlink to manage the database itself. Before stopping a program or taking a database offline, you can use these views to see

- All transactions and programs affected by a specific database
- All databases used by a transaction or program
- All transactions that a program processes
- All messages outstanding against each transaction

The following cross-reference views are provided:

View name	Description
IXRSUMR	Cross-Reference All Records
IXPSUMR	Program Cross-Reference Summary
IXPDSUMR	Program-to-Database Cross-Reference
IXPDEXCP	Program-to-Databases in Exception Cross-Reference
IXPTSUMR	Program-to-Transaction Cross-Reference
IXDSUMR	Database Cross-Reference Summary
IXDPSUMR	Database-to-Program Cross-Reference
IXDTSUMR	Database-to-Transaction Cross-Reference
IXTSUMR	Transaction Cross-Reference Summary
IXTPSUMR	Transaction-to-Program Cross-Reference
IXTDSUMR	Transaction-to-Database Cross-Reference
IXTDEXCP	Transaction-to-Databases in Exception Cross-Reference

Accessing the Cross-Reference Views

You can display any of the cross-reference views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting the view from the list displayed.

The cross-reference views allow you to pick your preferred point of entry for cross-reference information. If you prefer to view information from a database standpoint, choose a view whose third letter in the name begins with *D* (for database). If you prefer a transaction viewpoint, pick a view whose third letter is *T* (for transaction). If you prefer seeing information from a program standpoint, choose a view where the third letter in the name is *P* (for program).

The easiest way to access the cross-reference views is by hyperlinking from one of the Easy or Fast Menus to the IMS Cross-Reference Menu (EZIMSX), shown in Figure 201. From the IMS Cross-Reference Menu, simply select the option showing the mode of cross-referencing you want to use.

```
22MAR2004  12:01:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =EZIMSX===========(ALL======IMSxxx==)22MAR2004==12:01:09====MVIMS====D====1
                           IMS Cross Reference Menu
               IMS ID --->  IMSxxx
    Transaction to         +----------------------+   Database to
  . Database and Program   |   Place cursor on    | . Tran and Program
  . Database with Status   |    menu item and     | . Tran with Status
  . Program with Status    |     press ENTER      | . Program with Status
                           +----------------------+
    Transaction Selection                             Database Selection
  > Database and Program     Program to             > Tran and Program
  > Database with Status   . Database and Tran      > Tran with Status
  > Program with Status    . Database with Status   > Program with Status
                           . Tran with Status
                                                     Tools and Menus
                             Program Selection      > Utilities
                           > Database and Tran      > IMS Easy Menu
                           > Database with Status   > MVIMS Main Menu
                           > Tran with Status       > IMS SSI Menu
                                                    . Return...
```

Figure 201. IMS Cross-Reference Menu (EZIMSX)

Assessing the Impact of Actions against IMS Resources

The cross-reference views are an exceptional tool for managing IMS resources. You can assess beforehand the impact of actions you might take against programs, databases, or transactions.

Note: Issuing line commands in the cross-refference views requires a license for MAINVIEW AutoOPERATOR for IMS.

Taking a Database Offline

If you have a database in error, you can assess the impact of taking it offline before you take any action. You can identify both the programs and the transactions 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.

For example, you can begin at the IXDPSUMR view. It shows you information about all programs using the database. You can then hyperlink from the Program Name field to the IPGSUMR view, where you can modify the state of associated programs. After returning to the IXDPSUMR view, you can hyperlink from the Database field to the IDBSUMR view, where you can go ahead and take the database offline.

You can also begin at the IXDTSUMR view. It shows you transaction information related to the database. You can then hyperlink from the Tran Code field to the ITRSUMR view, where you can issue line commands against the associated transactions. After returning to the IXDTSUMR view, you can hyperlink from the Database field to the IDBSUMR view, where you can go ahead and issue line commands to take the database offline.

Solving Failure to Take Database Offline

When you set out 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.

You can start at the IXDPSUMR view. Given the database, you can see all programs that are sensitive to that database. You can also see the program type. If you select a program in the Program field, you can hyperlink to the IPGSUMR view, where you can change the state of the BMP or JBP program. After returning to the IXDPSUMR view, you can hyperlink from the Database field to the IDBSUMR view, where you can go ahead and issue a line command to take the database offline.

Taking a Program Offline

When you need to take an application offline (perhaps for an online change), you can easily identify all transactions that are affected by that program—and you can modify their state first. You can also ensure that the message queue does not contain messages for any of the transactions that are processed by the application you are going to modify.

You can verify the status of all transactions that are processed by a given program, and you can take action against the individual transaction and/or the program.

For example, you can start at the IXPTSUMR view. Here you can see all transactions the program processes—and their status. By hyperlinking from the Tran Code field, you access the ITRSUMR view, where you can issue line commands against the transaction or hyperlink further to see all messages outstanding against it. Based on what you see, you may decide to allow a message to complete, or you may decide to stop the transaction and allow the backlog of messages to drain. After returning to the IXPTSUMR view, you can hyperlink from the Program Name field to the IPGSUMR view, where you can go ahead and issue line commands to take the program offline.

Solving Program Failure at Startup

When a program fails at startup due to unavailable resources (abend U3303, for example), you have an easy way to identify the unavailable resource and take action against it.

You can begin at the IXPDSUMR view. It shows you whether all needed databases are available and if not, the reason why. You can then hyperlink from the Database field to the IDBSUMR view, where you can issue line commands to modify the state of the database in question. After returning to the IXPDSUMR, you can hyperlink from the Program Name field to the IPGSUMR view, where you can go ahead and start the program.

Cross-Reference All Records View

This section describes the Cross-Reference All Records view (IXRSUMR), which is shown in Figure 202. You can use this view when you want to see a complete cross-reference of all programs, databases, and transactions in the IMS.

The Cross-Reference All Records view is unsummarized. It contains a line entry for each database/program/transaction association. Each line entry is a separate record. The records are unsorted.

To display the IXRSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  13:30:40 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IXRSUMR===========X19H=====*========22MAR2004==13:30:39====MVIMS====D==200
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
    DBFSAMP4 FPSAMP2  DBFSAMD4 X19H     X19H     SYSC     IMSxxx
    DFHSAM15  no tran DI21PART X19H     X19H     SYSC     IMSxxx
    DFHSAM24  no tran DI21PART X19H     X19H     SYSC     IMSxxx
```

Figure 202. Cross-Reference All Records View (IXRSUMR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Because all records are displayed, this view contains no summarization or hyperlinks.

Program Cross-Reference Summary View

This section describes the Program Cross-Reference Summary view (IXPSUMR), which is shown in Figure 203. You can use this view to cross-reference programs and their associated transactions and databases.

The Program Cross-Reference Summary view lists all transactions and databases associated with all programs. With this view, you can

- Assess the impact of any actions you might take against a program
- Hyperlink to a view where you can perform actions against the program

To display the IXPSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:25:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IXPSUMR===========IMSxxx===*========22MAR2004==14:25:09====MVIMS====D==200
CMD Program  Tran     Database IMS      Execute  MVS      IMS
--- Name     Code              Id       IMS Id   Name     Name
    APPC02   APPC02    unavail X17H     X17H     SYSC     IMSxxx
    APPC03   APPC03    unavail X17H     X17H     SYSC     IMSxxx
    APPC04   APPC04    unavail X17H     X17H     SYSC     IMSxxx
    APPC05   APPC05    unavail X17H     X17H     SYSC     IMSxxx
    APPC06   APPC06    unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM01 BBFTRN01  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM02  no tran  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM03 BBFTRN03  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM04  no tran  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM05 BBFTRN05  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM06  no tran  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM07 BBFTRN07  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM08  no tran  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM09 BBFTRN09  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM10  no tran  unavail X17H     X17H     SYSC     IMSxxx
    BBFPGM11 BBFTRN11  unavail X17H     X17H     SYSC     IMSxxx
```

Figure 203. Program Cross-Reference Summary View (IXPSUMR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Program-to-Database Cross-Reference View

This section describes the Program-to-Database Cross-Reference view (IXPDSUMR), which is shown in Figure 204 and Figure 205.

This view lists all programs, the databases they are sensitive to, and the status of those databases. You can use this summary view to

- See whether needed database and program resources are available before starting a program
- Hyperlink to issue line commands against a database
- Hyperlink to issue line commands against a program

Note: Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

If you want to check on resource availability for a particular program, simply hyperlink from the Database field. A filtered view of IDBSUMR appears, showing the status of all databases the program is sensitive to.

This view lists all programs, with their status, OS/390 name, and IMS ID. It also lists every database that each program needs to run. It provides the following information about each database: Level 1 and Level 2 status, authorization state, access method, organization type, access limit, EEQE count, local and global DMB numbers, and whether the database has been defined as nonrecoverable.

To display the IXPDSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:30:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXPDSUMR=========X19H=====*========22MAR2004==14:30:31====MVIMS====D==115
CMD Program  IMS  Program         Database TYPE ORG  STATUS 1 STATUS 2 AUTH
--- Name     Id   Status                   ---- ---- -------- -------- State---
    DBFSAMP1 X19H Started         DBFSAMD3 DEDB VSAM NOT-OPEN          N/A
    DBFSAMP2 X19H Started         DBFSAMD4           NOT-OPEN          NOT-AUTH
    DBFSAMP3 X19H Started         DBFSAMD4           NOT-OPEN          NOT-AUTH
    DBFSAMP3 X19H Started         DBFSAMD2 MSDB      OPENED            NOT-AUTH
    DBFSAMP3 X19H Started         DBFSAMD1 MSDB      OPENED            NOT-AUTH
    DBFSAMP3 X19H Started         DBFSAMD3 DEDB VSAM NOT-OPEN          N/A
    DBFSAMP4 X19H Started         DBFSAMD1 MSDB      OPENED            NOT-AUTH
    DBFSAMP4 X19H Started         DBFSAMD3 DEDB VSAM NOT-OPEN          N/A
    DBFSAMP4 X19H Started         DBFSAMD2 MSDB      OPENED            NOT-AUTH
    DBFSAMP4 X19H Started         DBFSAMD4           NOT-OPEN          NOT-AUTH
    DBFSAMP5 X19H Started         DBFSAMD4           NOT-OPEN          NOT-AUTH
    DBFSAMP6 X19H Started         DBFSAMD3 DEDB VSAM NOT-OPEN          N/A
    DFHSAM04 X19H Started         DI21PART           NOT-OPEN          NOT-AUTH
    DFHSAM05 X19H Started         DI21PART           NOT-OPEN          NOT-AUTH
    DFHSAM14 X19H Started         DI21PART           NOT-OPEN          NOT-AUTH
    DFHSAM15 X19H Started         DI21PART           NOT-OPEN          NOT-AUTH
```

Figure 204. Program-to-Database Cross-Reference View (IXPDSUMR)

```
22MAR2004  14:31:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXPDSUMR==========X19H=====*========22MAR2004==14:30:31====MVIMS====D==115
CMD Program  AUTH     ACCESS LDMB GDMB EEQE Non-  MVS
--- Name     State--- LEVEL- ---- ---- Cnt- Recov Name
    DBFSAMP1 N/A      UPDT    122           N     SYSC
    DBFSAMP2 NOT-AUTH UPDT    123           N     SYSC
    DBFSAMP3 NOT-AUTH UPDT    123           N     SYSC
    DBFSAMP3 NOT-AUTH EXCL    121           N     SYSC
    DBFSAMP3 NOT-AUTH EXCL    120           N     SYSC
    DBFSAMP3 N/A      UPDT    122           N     SYSC
    DBFSAMP4 NOT-AUTH EXCL    120           N     SYSC
    DBFSAMP4 N/A      UPDT    122           N     SYSC
    DBFSAMP4 NOT-AUTH EXCL    121           N     SYSC
    DBFSAMP4 NOT-AUTH UPDT    123           N     SYSC
    DBFSAMP5 NOT-AUTH UPDT    123           N     SYSC
    DBFSAMP6 N/A      UPDT    122           N     SYSC
    DFHSAM04 NOT-AUTH UPDT    124           N     SYSC
    DFHSAM05 NOT-AUTH UPDT    124           N     SYSC
    DFHSAM14 NOT-AUTH UPDT    124           N     SYSC
    DFHSAM15 NOT-AUTH UPDT    124           N     SYSC
```

Figure 205. Program-to-Database Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXPDSUMR view.

Hyperlink from	To see
Database	IDBSUMR view, where you can see the status of all databases the program is sensitive to and issue line commands against databases
Program Name	IPGSUMR view, where you can see more program information and modify programs

Program-to-Databases with Exceptions Cross-Reference View

This section describes the Program-to-Databases with Exceptions Cross-Reference view (IXPDEXCP), shown in Figures 206 and 207. The view provides useful 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.

From this view, you can hyperlink to issue line commands against a program or a database (if you have a license for MAINVIEW AutoOPERATOR for IMS).

To display the IXPDEXCP view, enter the view name on any IPSM command line. You can also hyperlink to the view from the IMS DBA Easy Menus (EZIDBA and EZIDBAR).

```
22MAR2004  14:30:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXPDEXCP=========X19H=====*========22MAR2004==14:30:31====MVIMS====D===10
CMD Program  IMS  Program         Database TYPE ORG  STATUS 1 STATUS 2 AUTH
--- Name     Id   Status                   ---- ---- -------- -------- State---
    DDLTPSB  I8A  Started         DDLTDBD  HISM VSAM STOPPED  NOT-OPEN NOT-AUTH
    DDLTPSBL I8A  Started         DDLTDBD  HISM VSAM STOPPED  NOT-OPEN NOT-AUTH
    IVP1H    I8A  Started         DB1H     PHID OSAM STOPPED           N/A
    IVP1H    I8A  Started         DB1HSX   PSIX VSAM STOPPED           N/A
    IVP1HB   I8A  Started         DB1H     PHID OSAM STOPPED           N/A
    IVP1HB   I8A  Started         DB1HSX   PSIX VSAM STOPPED           N/A
    MVIPSBB1 I8A  Started         DDLTDBD  HISM VSAM STOPPED  NOT-OPEN NOT-AUTH
    PE4CNINQ I8A  Started         BE2PCUST HISM VSAM NOT-OPEN ALLOC-F  NOT-REG
    PE4CODEL I8A  Started         BE2PCUST HISM VSAM NOT-OPEN ALLOC-F  NOT-REG
    PE4CODEL I8A  Started         BE3ORDER HIDM VSAM NOT-OPEN ALLOC-F  NOT-AUTH
```

Figure 206. Program-to-Databases with Exceptions Cross-Reference View (IXPDEXCP)

```
22MAR2004  14:31:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXPDSUMR=========X19H=====*========22MAR2004==14:30:31====MVIMS====D===10
CMD Program  AUTH     ACCESS LDMB GDMB EEQE Non-  MVS
--- Name     State--- LEVEL- ---- ---- Cnt- Recov Name
    DDLTPSB  NOT-AUTH UPDT    130           N/A   SJSC
    DDLTPSBL NOT-AUTH UPDT    130           N/A   SJSC
    IVP1H    N/A      UPDT    127           N/A   SJSC
    IVP1H    N/A      UPDT    128           N/A   SJSC
    IVP1HB   N/A      UPDT    127           N/A   SJSC
    IVP1HB   N/A      UPDT    128           N/A   SJSC
    MVIPSBB1 NOT-AUTH UPDT    130           N/A   SJSC
    PE4CNINQ NOT-REG  EXCL    108           N/A   SJSC
    PE4CODEL NOT-REG  EXCL    108           N/A   SJSC
    PE4CODEL NOT-AUTH EXCL    109           N/A   SJSC
```

Figure 207. Program-to-Databases with Exceptions Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXPDEXCP view.

Hyperlink from	**To see**
Program Name	IPGSUMR view, where you can see more program information and modify programs
Database	IDBSUMR view, where you can see the status of all databases that the program is sensitive to and issue line commands against databases

Program-to-Transaction Cross-Reference View

This section describes the Program-to-Transaction Cross-Reference view (IXPTSUMR), which is shown in Figure 208 and Figure 209. You can refer to this view for useful program-to-transaction cross-reference information.

This view lists all programs and the transactions they are running. It also provides information about each transaction. With this summary view, you can ensure that definitions are consistent across a sysplex. You can also

- Assess beforehand the impact of any actions you might take against a program
- Hyperlink to issue line commands to modify a program dynamically
- Hyperlink to issue line commands against a transaction

Note: Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

For example, if you need to take action against a program, you can hyperlink from the Tran Code field first. This takes you to the ITRSUMR view, where you can view all transactions the program processes. If you hyperlink from there, you can see all messages outstanding against the transaction. Based on what you see, you may decide to allow a message to complete, or you may decide to stop the transaction and allow the backlog of messages to drain.

This view identifies program name and status, transaction, IMS ID, and the ID of the IMS where the transaction is executing. It also shows transaction status, current class, current and normal scheduling priority, process and parallel process limit, maximum number of regions where the transaction can run, number of messages currently queued, bytes queued, and OS/390 and IMS name.

To display the IXPTSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:27:48 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXPTSUMR==========IMSxxx===*========22MAR2004==14:27:47====MVIMS====D==149
CMD Program  IMS  Program        Tran     Exec  Status     Cls Curr Norm Parall
--- Name     Id   Status         Code     IMSId                Prty Prty  Limit
    APPC02   X17H Started        APPC02   X17H               1    7    7  65535
    APPC03   X17H Started        APPC03   X17H               1    7    7  65535
    APPC04   X17H Started        APPC04   X17H               1    7    7  65535
    APPC05   X17H Started        APPC05   X17H               1    7    7  65535
    APPC06   X17H Started        APPC06   X17H               1    7    7  65535
    BBFPGM01 X17H Started        BBFTRN01 X17H               0    0    0      0
    BBFPGM03 X17H Started        BBFTRN03 X17H               0    0    0      0
    BBFPGM05 X17H Started        BBFTRN05 X17H               0    0    0      0
    BBFPGM07 X17H Started        BBFTRN07 X17H               0    0    0      0
    BBFPGM09 X17H Started        BBFTRN09 X17H               0    0    0      0
    BBFPGM11 X17H Started        BBFTRN11 X17H               0    0    0      0
    BBFPGM13 X17H Started        BBFTRN13 X17H               0    0    0      0
    BBFPGM15 X17H Started        BBFTRN15 X17H               0    0    0      0
    BBFPGM17 X17H Started        BBFTRN17 X17H               0    0    0      0
    BBFPGM19 X17H Started        BBFTRN19 X17H               0    0    0      0
    BBFPGM21 X17H Started        BBFTRN21 X17H               0    0    0      0
```

Figure 208. Program-to-Transaction Cross-Reference View (IXPTSUMR)

```
22MAR2004  14:28:52 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXPTSUMR==========IMSxxx===*========22MAR2004==14:27:47====MVIMS====D==149
CMD Program  Parall Proc  Max Num   Bytes  Rgns IMS      MVS
--- Name      Limit Limit Rgn Msgs  Queued Schd Name     Name
    APPC02    65535 65535   0                  IMSxxx   SYSC
    APPC03    65535 65535   0                  IMSxxx   SYSC
    APPC04    65535 65535   0                  IMSxxx   SYSC
    APPC05    65535 65535   0                  IMSxxx   SYSC
    APPC06    65535 65535   0                  IMSxxx   SYSC
    BBFPGM01      0     0   0                  IMSxxx   SYSC
    BBFPGM03      0     0   0                  IMSxxx   SYSC
    BBFPGM05      0     0   0                  IMSxxx   SYSC
    BBFPGM07      0     0   0                  IMSxxx   SYSC
    BBFPGM09      0     0   0                  IMSxxx   SYSC
    BBFPGM11      0     0   0                  IMSxxx   SYSC
    BBFPGM13      0     0   0                  IMSxxx   SYSC
    BBFPGM15      0     0   0                  IMSxxx   SYSC
    BBFPGM17      0     0   0                  IMSxxx   SYSC
    BBFPGM19      0     0   0                  IMSxxx   SYSC
    BBFPGM21      0     0   0                  IMSxxx   SYSC
```

Figure 209. Program-to-Transaction Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXPTSUMR view.

Hyperlink from	**To see**
Program Name	IPGSUMR view, where you can modify the selected program dynamically
Tran Code	ITRSUMR view, where you can issue line commands against the selected transaction

Database Cross-Reference Summary View

This section describes the Database Cross-Reference Summary view (IXDSUMR), which is shown in Figure 210. You can use the view to cross-reference databases with the programs and transactions that use them or are associated with them.

The Database Cross-Reference Summary view lists all databases and all programs and transactions that are sensitive to each database. It also shows the IMS ID, the ID of the IMS where the transaction is executing, OS/390 name, and IMS name.

With this view, you can

- Assess the impact of any actions you might take against a database
- Hyperlink to a view where you can perform an action against a database

Note: Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

To display the IXDSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:20:35 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IXDSUMR===========X19H=====*========22MAR2004==14:20:35====MVIMS====D===25
CMD Database Program  Tran     IMS      Execute  MVS      IMS
---          Name     Code     Id       IMS Id   Name     Name
     unavail ******** ******** X19H     X19H     SYSC     IMSxxx
    BE2PCUST PTEST0** TTEST0** X19H     X19H     SYSC     IMSxxx
    BE3ORDER PTEST0** TTEST0** X19H     X19H     SYSC     IMSxxx
    BE3ORDRX PTEST0** TTEST0** X19H     X19H     SYSC     IMSxxx
    BE3PARTS PTEST0** TTEST0** X19H     X19H     SYSC     IMSxxx
    BE3PSID1 PTEST0** TTEST0** X19H     X19H     SYSC     IMSxxx
    CUSTHDAM ******** ******** X19H     X19H     SYSC     IMSxxx
    CUSTHIDM ******** ******** X19H     X19H     SYSC     IMSxxx
    CUSTHISM ******** ******** X19H     X19H     SYSC     IMSxxx
    CUSTINDX ******** ******** X19H     X19H     SYSC     IMSxxx
    DBFSAMD1 DBFSAMP* FPSAMP** X19H     X19H     SYSC     IMSxxx
    DBFSAMD2 DBFSAMP* FPSAMP** X19H     X19H     SYSC     IMSxxx
    DBFSAMD3 DBFSAMP* ******** X19H     X19H     SYSC     IMSxxx
    DBFSAMD4 DBFSAMP* ******** X19H     X19H     SYSC     IMSxxx
    DI21PART DF****** ******** X19H     X19H     SYSC     IMSxxx
    IN01A01  PTEST02  TTEST02  X19H     X19H     SYSC     IMSxxx
```

Figure 210. Database Cross-Reference Summary View (IXDSUMR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Database-to-Program Cross-Reference View

This section describes the Database-to-Program Cross-Reference view (IXDPSUMR), which is shown in Figure 211 and Figure 212. You can use this view to see useful database-to-program cross-reference information.

This view lists all databases, the programs that use them, and the transactions that are associated with them. You can use this summary view to

- Assess beforehand the impact of any actions you might take against a database
- See whether needed database and program resources are available before starting a program
- Hyperlink to issue line commands against a database
- Hyperlink to issue line commands against a program

Note: Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

This view is especially useful for assessing the impact of taking a database offline. It provides extensive information about each program associated with a database: status, type, scheduling type, associated transaction, IMS ID and jobname, and OS/390 name.

To display the IXDPSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:22:48 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXDPSUMR==========X19H=====*========22MAR2004==14:22:42====MVIMS====D==115
CMD Database IMS  DB       DB       Program  Type Status          Sched    MVS
---          Id   Status 1 Status 2 Name                          Type     Name
    BE2PCUST X19H NOT-OPEN          PTEST02  BMP  Started         Parallel SYSC
    BE2PCUST X19H NOT-OPEN          PTEST01  BMP  Started         Parallel SYSC
    BE3ORDER X19H NOT-OPEN          PTEST02  BMP  Started         Parallel SYSC
    BE3ORDER X19H NOT-OPEN          PTEST01  BMP  Started         Parallel SYSC
    BE3ORDRX X19H NOT-OPEN          PTEST01  BMP  Started         Parallel SYSC
    BE3ORDRX X19H NOT-OPEN          PTEST02  BMP  Started         Parallel SYSC
    BE3PARTS X19H NOT-OPEN          PTEST02  BMP  Started         Parallel SYSC
    BE3PARTS X19H NOT-OPEN          PTEST01  BMP  Started         Parallel SYSC
    BE3PSID1 X19H NOT-OPEN          PTEST02  BMP  Started         Parallel SYSC
    BE3PSID1 X19H NOT-OPEN          PTEST01  BMP  Started         Parallel SYSC
    CUSTHDAM X19H NOT-OPEN          GBGPSBM1 TP   Started         Parallel SYSC
    CUSTHDAM X19H NOT-OPEN          GBGPSBB3 BMP  Started         Parallel SYSC
    CUSTHDAM X19H NOT-OPEN          PTEST01  BMP  Started         Parallel SYSC
    CUSTHDAM X19H NOT-OPEN          GBGPSBB1 BMP  Started         Parallel SYSC
    CUSTHDAM X19H NOT-OPEN          GBGPSBB2 BMP  Started         Parallel SYSC
    CUSTHDAM X19H NOT-OPEN          GBGPSBB4 BMP  Started         Parallel SYSC
```

Figure 211. Database-to-Program Cross-Reference View (IXDPSUMR)

```
22MAR2004  14:23:59 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXDPSUMR==========X19H=====*========22MAR2004==14:22:42====MVIMS====D==115
CMD Database MVS  IMS
---          Name Name
    BE2PCUST SYSC IMSxxx
    BE2PCUST SYSC IMSxxx
    BE3ORDER SYSC IMSxxx
    BE3ORDER SYSC IMSxxx
    BE3ORDRX SYSC IMSxxx
    BE3ORDRX SYSC IMSxxx
    BE3PARTS SYSC IMSxxx
    BE3PARTS SYSC IMSxxx
    BE3PSID1 SYSC IMSxxx
    BE3PSID1 SYSC IMSxxx
    CUSTHDAM SYSC IMSxxx
    CUSTHDAM SYSC IMSxxx
    CUSTHDAM SYSC IMSxxx
    CUSTHDAM SYSC IMSxxx
    CUSTHDAM SYSC IMSxxx
    CUSTHDAM SYSC IMSxxx
```

Figure 212. Database-to-Program Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXDPSUMR view.

Hyperlink from	To see
Database	IDBSUMR view, where you can issue line commands against the selected database
Program Name	IPGSUMR view, where you can modify the selected program

Database-to-Transaction Cross-Reference View

This section describes the Database-to-Transaction Cross-Reference view (IXDTSUMR), which is shown in Figure 213 and Figure 214. You can use this view to see useful database-to-transaction cross-reference information.

This view lists all databases and the transactions associated with them. You can use this summary view to

- Assess beforehand the impact of any actions you might take against a database
- Hyperlink to ICLSUMR view, where you can see processing class information for the transaction
- Hyperlink to IRGNSUMR view, where you can see region information for the transaction

This view is especially useful for assessing the impact of taking a database offline. You can easily see the transactions associated with the database and all messages outstanding against the transactions.

Based on what you see, you may decide to allow a message to complete, or you may decide to stop the transaction and allow the backlog of messages to drain, before issuing the desired action against the database.

The IXDTSUMR view identifies the database, its status 1 and status 2 states, and its associated transactions. It provides the following transaction information: status, class, number of messages, bytes queued, current and normal priority, maximum number of regions where it can run, and number of regions scheduling it.

To display the IXDTSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:24:40 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXDTSUMR==========X19H=====*========22MAR2004==14:24:39====MVIMS====D===84
CMD Database IMS  DB       DB       Tran     Exec   Tran       Cls Bytes Norm
---          Id   Status 1 Status 2 Code     IMSId  Status         Queue Prty
    BE2PCUST X19H NOT-OPEN          TTEST01  X19H                5           0
    BE2PCUST X19H NOT-OPEN          TTEST02  X19H                5           0
    BE3ORDER X19H NOT-OPEN          TTEST01  X19H                5           0
    BE3ORDER X19H NOT-OPEN          TTEST02  X19H                5           0
    BE3ORDRX X19H NOT-OPEN          TTEST02  X19H                5           0
    BE3ORDRX X19H NOT-OPEN          TTEST01  X19H                5           0
    BE3PARTS X19H NOT-OPEN          TTEST01  X19H                5           0
    BE3PARTS X19H NOT-OPEN          TTEST02  X19H                5           0
    BE3PSID1 X19H NOT-OPEN          TTEST02  X19H                5           0
    BE3PSID1 X19H NOT-OPEN          TTEST01  X19H                5           0
    CUSTHDAM X19H NOT-OPEN          GBGTRNM1 X19H                1           1
    CUSTHDAM X19H NOT-OPEN          THDAMINQ X19H                1           5
    CUSTHDAM X19H NOT-OPEN          GBGTRNB1 X19H                4           0
    CUSTHDAM X19H NOT-OPEN          GBGTRNB2 X19H                4           0
    CUSTHDAM X19H NOT-OPEN          GBGTRNB3 X19H                4           0
    CUSTHDAM X19H NOT-OPEN          THDAMUPD X19H                2           5
```

Figure 213. Database-to-Transaction Cross-Reference View (IXDTSUMR)

```
22MAR2004  14:25:59 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXDTSUMR==========X19H=====*========22MAR2004==14:24:39====MVIMS====D===84
CMD Database Norm  Parallel Proc  Max Num   Curr Rgns MVS  IMS
---          Prty   Limit   Limit Rgn Msgs  Prty Schd Name Name
    BE2PCUST     0    65535 65535   0          0      SYSC IMSxxx
    BE2PCUST     0    65535 65535   0          0      SYSC IMSxxx
    BE3ORDER     0    65535 65535   0          0      SYSC IMSxxx
    BE3ORDER     0    65535 65535   0          0      SYSC IMSxxx
    BE3ORDRX     0    65535 65535   0          0      SYSC IMSxxx
    BE3ORDRX     0    65535 65535   0          0      SYSC IMSxxx
    BE3PARTS     0    65535 65535   0          0      SYSC IMSxxx
    BE3PARTS     0    65535 65535   0          0      SYSC IMSxxx
    BE3PSID1     0    65535 65535   0          0      SYSC IMSxxx
    BE3PSID1     0    65535 65535   0          0      SYSC IMSxxx
    CUSTHDAM     1    65535 65535   0          1      SYSC IMSxxx
    CUSTHDAM     5        1     5   0          5      SYSC IMSxxx
    CUSTHDAM     0    65535 65535   0          0      SYSC IMSxxx
    CUSTHDAM     0    65535 65535   0          0      SYSC IMSxxx
    CUSTHDAM     0    65535 65535   0          0      SYSC IMSxxx
    CUSTHDAM     5    65535 65535   0          5      SYSC IMSxxx
```

Figure 214. Database-to-Transaction Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXDTSUMR view.

Hyperlink from	To see
Rgns Schd	IRGNSUMR view, where you can see region information for the selected transaction
Cls	ICLSUMR view, where you can see processing class information for the selected transaction

Transaction Cross-Reference Summary View

This section describes the Transaction Cross-Reference Summary view (IXTSUMR), which is shown in Figure 215. You can use this summary view to cross-reference transactions with their associated programs and databases.

This view lists all transactions, their associated programs and databases, ID of the IMS the transaction is defined on, ID of the IMS the transaction is executing on, OS/390 name, and IMS name.

With this view, you can

- Assess the impact of any actions you might take against a transaction
- Hyperlink to issue line commands against a transaction (if you have a license for MAINVIEW AutoOPERATOR for IMS)
- Troubleshoot problems with a transaction

For example, if a transaction is not running, you can use this view to find out why. By hyperlinking from the Database and Program Name fields, you can see if a database or program it needs is unavailable.

To display the IXTSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  13:35:30 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =IXTSUMR===========X19H=====*========22MAR2004==13:35:30====MVIMS====D==110
CMD Tran     Program  Database IMS      Execute  MVS      IMS
--- Code     Name              Id       IMS Id   Name     Name
     no tran ******** ******** X19H     X19H     SYSC     IMSxxx
    ADDINV   DFSSAM04 DI21PART X19H     X19H     SYSC     IMSxxx
    ADDPART  DFSSAM04 DI21PART X19H     X19H     SYSC     IMSxxx
    APPC06   APPC06    unavail X19H     X19H     SYSC     IMSxxx
    CLOSE    DFSSAM05 DI21PART X19H     X19H     SYSC     IMSxxx
    DISBURSE DFSSAM06 DI21PART X19H     X19H     SYSC     IMSxxx
    DLETINV  DFSSAM04 DI21PART X19H     X19H     SYSC     IMSxxx
    DLETPART DFSSAM04 DI21PART X19H     X19H     SYSC     IMSxxx
    DSN8CS   DSN8IC0   unavail X19H     X19H     SYSC     IMSxxx
    DSN8PP   DSN8IQ0   unavail X19H     X19H     SYSC     IMSxxx
    DSN8PS   DSN8IP0   unavail X19H     X19H     SYSC     IMSxxx
    DSN8PT   DSN8IH0   unavail X19H     X19H     SYSC     IMSxxx
    DSPALLI  DFSSAM07 DI21PART X19H     X19H     SYSC     IMSxxx
    DSPINV   DFSSAM03 DI21PART X19H     X19H     SYSC     IMSxxx
    FPSAMP1  DBFSAMP3 DBFSAMD* X19H     X19H     SYSC     IMSxxx
    FPSAMP2  DBFSAMP4 DBFSAMD* X19H     X19H     SYSC     IMSxxx
    GBGTRNB1 GBGPSBB1 CUST**** X19H     X19H     SYSC     IMSxxx
```

Figure 215. Transaction Cross-Reference Summary View (IXTSUMR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Transaction-to-Program Cross-Reference View

This section describes the Transaction-to-Program Cross-Reference view (IXTPSUMR), which is shown in Figure 216 and Figure 217.

This view lists all transactions with their associated programs, databases, and other information. You can use this summary view to

- See all the IMS systems where your transactions are defined and where they are defined to execute (different for remote locations)
- See whether needed database and program resources are available before starting a program
- Hyperlink to issue line commands against a transaction
- Hyperlink to issue line commands against a program

Note: Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

This view identifies transaction, IMS ID, executing IMS ID, OS/390 name, IMS jobname, and program name, status, type, and scheduling type.

To display the IXTPSUMR view, enter the view name on any IPSM command line.

```
22MAR2004  14:34:16 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXTPSUMR==========IMSxxx===*========22MAR2004==14:34:16====MVIMS====D==149
CMD Tran     IMS  Tran       Program  Exec  Type Program         Sched    MVS
--- Code     Id   Status     Name     IMSId      Status          Type     Name
    ADDINV   X17H            DFSSAM04 X17H  TP   Started         Serial   SYSC
    ADDPART  X17H            DFSSAM04 X17H  TP   Started         Serial   SYSC
    APPC02   X17H            APPC02   X17H  TP   Started         Serial   SYSC
    APPC03   X17H            APPC03   X17H  TP   Started         Serial   SYSC
    APPC04   X17H            APPC04   X17H  TP   Started         Serial   SYSC
    APPC05   X17H            APPC05   X17H  TP   Started         Serial   SYSC
    APPC06   X17H            APPC06   X17H  TP   Started         Serial   SYSC
    BBFTRN01 X17H            BBFPGM01 X17H  FP N Started         Serial   SYSC
    BBFTRN03 X17H            BBFPGM03 X17H  FP N Started         Serial   SYSC
    BBFTRN05 X17H            BBFPGM05 X17H  FP N Started         Serial   SYSC
    BBFTRN07 X17H            BBFPGM07 X17H  FP N Started         Serial   SYSC
    BBFTRN09 X17H            BBFPGM09 X17H  FP N Started         Serial   SYSC
    BBFTRN11 X17H            BBFPGM11 X17H  FP N Started         Serial   SYSC
    BBFTRN13 X17H            BBFPGM13 X17H  FP N Started         Serial   SYSC
    BBFTRN15 X17H            BBFPGM15 X17H  FP N Started         Serial   SYSC
    BBFTRN17 X17H            BBFPGM17 X17H  FP N Started         Serial   SYSC
```

Figure 216. Transaction-to-Program Cross-Reference View (IXTPSUMR)

```
22MAR2004  14:35:18 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXTPSUMR==========IMSxxx===*========22MAR2004==14:34:16====MVIMS====D==149
CMD Tran     MVS  IMS
--- Code     Name Name
    ADDINV   SYSC IMSxxx
    ADDPART  SYSC IMSxxx
    APPC02   SYSC IMSxxx
    APPC03   SYSC IMSxxx
    APPC04   SYSC IMSxxx
    APPC05   SYSC IMSxxx
    APPC06   SYSC IMSxxx
    BBFTRN01 SYSC IMSxxx
    BBFTRN03 SYSC IMSxxx
    BBFTRN05 SYSC IMSxxx
    BBFTRN07 SYSC IMSxxx
    BBFTRN09 SYSC IMSxxx
    BBFTRN11 SYSC IMSxxx
    BBFTRN13 SYSC IMSxxx
    BBFTRN15 SYSC IMSxxx
    BBFTRN17 SYSC IMSxxx
```

Figure 217. Transaction-to-Program Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXTPSUMR view.

Hyperlink from	**To see**
Tran Code	ITRSUMR view, where you can issue line commands against the selected transaction
Program Name	IPGSUMR view, where you can issue line commands to modify the selected program

Transaction-to-Database Cross-Reference View

This section describes the Transaction-to-Database Cross-Reference view (IXTDSUMR), which is shown in Figures 218 and 219. This view provides useful cross-reference information that can help you pinpoint problems with resource availability.

With this view, you can

- See if database resources that a transaction needs to run are available
- Discover why resources are not available
- Hyperlink to issue line commands against a database
- Hyperlink to issue line commands against a transaction

Note: Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

This view lists all transactions, their associated databases, database status, and other information. It provides the following database information: current status, authorization state, access method and organization type, access level, EEQE count, local and global DMB numbers, and whether the database has been defined as nonrecoverable.

The view also provides the following transaction information: transaction name and status, ID of the IMS where the transaction is defined, ID of the IMS where the transaction is defined to execute, OS/390 name, and IMS jobname.

To display the IXTDSUMR view, enter view name on any IPSM command line.

```
22MAR2004  14:28:07 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXTDSUMR==========X19H=====*========22MAR2004==14:28:06====MVIMS====D===84
CMD Tran     IMS  Tran       Exec  Database TYPE ORG  STATUS 1 STATUS 2 AUTH
--- Code     Id   Status     IMSId          ---- ---- -------- -------- STATE--
    ADDINV   X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    ADDPART  X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    CLOSE    X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    DISBURSE X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    DLETINV  X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    DLETPART X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    DSPALLI  X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    DSPINV   X19H            X19H  DI21PART           NOT-OPEN          NOT-AUT
    FPSAMP1  X19H            X19H  DBFSAMD4           NOT-OPEN          NOT-AUT
    FPSAMP1  X19H            X19H  DBFSAMD2 MSDB      OPENED            NOT-AUT
    FPSAMP1  X19H            X19H  DBFSAMD3 DEDB VSAM NOT-OPEN          N/A
    FPSAMP1  X19H            X19H  DBFSAMD1 MSDB      OPENED            NOT-AUT
    FPSAMP2  X19H            X19H  DBFSAMD2 MSDB      OPENED            NOT-AUT
    FPSAMP2  X19H            X19H  DBFSAMD4           NOT-OPEN          NOT-AUT
    FPSAMP2  X19H            X19H  DBFSAMD3 DEDB VSAM NOT-OPEN          N/A
    FPSAMP2  X19H            X19H  DBFSAMD1 MSDB      OPENED            NOT-AUT
```

Figure 218. Transaction-to-Database Cross-Reference View (IXTDSUMR)

```
22MAR2004  14:29:17 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXTDSUMR==========X19H=====*========22MAR2004==14:28:06====MVIMS====D===84
CMD Tran     AUTH     ACCESS LDMB GDMB EEQE NON-  MVS  IMS
--- Code     STATE--- LEVEL- ---- ---- CNT- RECOV Name Name
    ADDINV   NOT-AUTH UPDT    124           N     SYSC IMSxxx
    ADDPART  NOT-AUTH UPDT    124           N     SYSC IMSxxx
    CLOSE    NOT-AUTH UPDT    124           N     SYSC IMSxxx
    DISBURSE NOT-AUTH UPDT    124           N     SYSC IMSxxx
    DLETINV  NOT-AUTH UPDT    124           N     SYSC IMSxxx
    DLETPART NOT-AUTH UPDT    124           N     SYSC IMSxxx
    DSPALLI  NOT-AUTH UPDT    124           N     SYSC IMSxxx
    DSPINV   NOT-AUTH UPDT    124           N     SYSC IMSxxx
    FPSAMP1  NOT-AUTH UPDT    123           N     SYSC IMSxxx
    FPSAMP1  NOT-AUTH EXCL    121           N     SYSC IMSxxx
    FPSAMP1  N/A      UPDT    122           N     SYSC IMSxxx
    FPSAMP1  NOT-AUTH EXCL    120           N     SYSC IMSxxx
    FPSAMP2  NOT-AUTH EXCL    121           N     SYSC IMSxxx
    FPSAMP2  NOT-AUTH UPDT    123           N     SYSC IMSxxx
    FPSAMP2  N/A      UPDT    122           N     SYSC IMSxxx
```

Figure 219. Transaction-to-Database Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXTDSUMR view.

Hyperlink from	To see
Tran Code	ITRSUMR view, where you can issue line commands against the selected transaction
Database	IDBSUMR view, where you can issue line commands to modify the selected database.

Transaction-to-Databases with Exceptions Cross-Reference View

This section describes the Transaction-to-Databases with Exceptions Cross-Reference view (IXTDEXCP), shown in Figures 220 and 221. The view provides useful transaction-to-database cross-reference information for 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.

From this view, you can hyperlink to issue line commands against a transaction or a database (if you have a license for MAINVIEW AutoOPERATOR for IMS).

To display the IXTDEXCP view, enter the view name on any IPSM command line. You can also hyperlink to the view from the IMS DBA Easy Menus (EZIDBA and EZIDBAR).

```
22MAR2004  14:30:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IXTDEXCP=========X19H=====*========22MAR2004==14:30:31====MVIMS====D===10
CMD Tran     IMS  Tran       Exec  Database TYPE ORG  STATUS 1 STATUS 2 AUTH
--- Code     Id   Status     IMSId          ---- ---- -------- -------- State--
    IMFT1H   I8A  WT-CUTOFF  I8A   DB1H     PHID OSAM STOPPED           N/A
    IMFT1H   I8A  WT-CUTOFF  I8A   DB1HSX   PSIX VSAM STOPPED           N/A
    TE4CNINQ I8A  WT-CUTOFF  I8A   BE2PCUST HISM VSAM NOT-OPEN ALLOC-F  NOT-REG
    TE4CODEL I8A  WT-CUTOFF  I8A   BE2PCUST HISM VSAM NOT-OPEN ALLOC-F  NOT-REG
    TE4CODEL I8A  WT-CUTOFF  I8A   BE3ORDER HIDM VSAM NOT-OPEN ALLOC-F  NOT-AUT
    TE4CODEL I8A  WT-CUTOFF  I8A   BE3ORDRX INDX VSAM NOT-OPEN ALLOC-F  NOT-AUT
    TE4CODEL I8A  WT-CUTOFF  I8A   BE3PARTS HDAM VSAM NOT-OPEN ALLOC-F  NOT-AUT
    TE4CODEL I8A  WT-CUTOFF  I8A   BE3PSID1 INDX VSAM NOT-OPEN ALLOC-F  NOT-AUT
    TE4COINQ I8A  WT-CUTOFF  I8A   BE2PCUST HISM VSAM NOT-OPEN ALLOC-F  NOT-REG
    TE4COINQ I8A  WT-CUTOFF  I8A   BE3ORDER HIDM VSAM NOT-OPEN ALLOC-F  NOT-AUT
```

Figure 220. Transaction-to-Databases with Exceptions Cross-Reference View (IXTDEXCP)

```
22MAR2004  14:31:31 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IXTDSUMR=========X19H=====*========22MAR2004==14:30:31====MVIMS====D===10
CMD Tran     AUTH     ACCESS LDMB GDMB EEQE NON-  MVS  IMS
--- Code     State--- LEVEL- ---- ---- CNT- RECOV Name Name
    IMFT1H   N/A      UPDT    127           N/A   SJSC I8A332CT
    IMFT1H   N/A      UPDT    128           N/A   SJSC I8A332CT
    TE4CNINQ NOT-REG  EXCL    108           N/A   SJSC I8A332CT
    TE4CODEL NOT-REG  EXCL    108           N/A   SJSC I8A332CT
    TE4CODEL NOT-AUTH EXCL    109           N/A   SJSC I8A332CT
    TE4CODEL NOT-AUTH EXCL    110           N/A   SJSC I8A332CT
    TE4CODEL NOT-AUTH EXCL    111           N/A   SJSC I8A332CT
    TE4CODEL NOT-AUTH EXCL    112           N/A   SJSC I8A332CT
    TE4COINQ NOT-REG  EXCL    108           N/A   SJSC I8A332CT
    TE4COINQ NOT-AUTH EXCL    109           N/A   SJSC I8A332CT
```

Figure 221. Transaction-to-Databases with Exceptions Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IXTDEXCP view.

Hyperlink from	To see
Tran Code	ITRSUMR view, where you can see the status of all databases the transaction is sensitive to and issue line commands against databases
Database	IDBSUMR view, where you can see more database information and modify databases

Chapter 18. Managing IMS Database Activity

This chapter describes the IMS database activity views, which provide a powerful tool for database analysis. They make problem recognition in an N-way data sharing environment much easier. Database administrators can use the views to recognize and solve problems stemming from

- Badly organized databases
- I/O contention
- Buffer pool sizes and assignments
- Buffer cross-invalidation

While views like IRGNDLIR and STRAC identify I/O at a transaction level, the database activity views provide a database perspective. They are a system-wide resource, showing

- All DL/I calls against a database (except for MSDB and GSAM databases)
- All 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 on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity.

These views allow you to analyze I/O information as it relates to logical and physical databases. Realtime, interval, and history statistics are provided. Counts, rate, and elapsed time are reported for both DL/I calls and database I/O events.

Information is summarized in different ways, so you can solve database problems occurring at different levels. Summarization is by

- 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. Simply pick the view that corresponds to the type of information you need and the level at which you need to see it.

The database activity views are listed in Table 33 and Table 34 on page 276. This chapter describes and illustrates only realtime views. (The views described in this chapter are shaded in the tables). Where corresponding views from the two tables are nearly identical, only the Table 34 view is shown.

For information grouped by data sharing group, use the views listed in Table 33.

Table 33. Views that Group Information by Data Sharing Group

View name	Description	Refer to
IDAGDTLR	Database Activity Detail, Data Sharing Group Level (realtime)	Page 279
IDAGDTL	Database Activity Detail, Data Sharing Group Level (interval)	
IDAGSUMR	Database Activity, Data Sharing Group Level (realtime)	
IDAGSUM	Database Activity, Data Sharing Group Level (interval)	
IDALGSMR	Database Activity, Logical (PCB) Level (realtime)	Page 286
IDALGSM	Database Activity, Logical (PCB) Level (interval)	
IDAPGSMR	Database I/O Activity, Physical Database Level (realtime)	Page 288
IDAPGSM	Database I/O Activity, Physical Database Level (interval)	
IDAXGSMR	Database I/O Activity, Database/Volume Level (realtime)	Page 290
IDAXGSM	Database I/O Activity, Database/Volume Level (interval)	
IDAVGSMR	Database I/O Activity, Volume Level (realtime)	Page 292
IDAVGSM	Database I/O Activity, Volume Level (interval)	

For information grouped by IMS name, use the views listed in Table 34.

Table 34. Views that Group Information by IMS

View name	Description	Refer to
IDASSUMR	Database Activity, IMS System Level (realtime)	Page 281
IDASSUM	Database Activity, IMS System Level (interval)	
IDASDTLR	Database Activity Detail (realtime)	Page 283
IDASDTL	Database Activity Detail (interval)	
IDALSUMR	Database Activity, Logical (PCB) Level (realtime)	Page 286
IDALSUM	Database Activity, Logical (PCB) Level (interval)	
IDAPSUMR	Database I/O Activity, Physical Database Level (realtime)	Page 288
IDAPSUM	Database I/O Activity, Physical Database Level (interval)	
IDAXSUMR	Database I/O Activity, Database/Volume Level (realtime)	Page 290
IDAXSUM	Database I/O Activity, Database/Volume Level (interval)	
IDAVSUMR	Database I/O Activity, Volume Level (realtime)	Page 292
IDAVSUM	Database I/O Activity, Volume Level (interval)	
IDABVDTR	Database Activity Detail, VSAM Buffer Pool Level (realtime)	Page 294
IDABVDTL	Database Activity Detail, VSAM Buffer Pool Level (interval)	

Table 34. Views that Group Information by IMS (continued)

View name	Description	Refer to
IDABODTR	Database Activity, Detail OSAM Buffer Pool Level (realtime)	Page 296
IDABODTL	Database Activity, Detail OSAM Buffer Pool Level (interval)	
IDABVSMR	Database Activity, VSAM Buffer Pool Level (realtime)	Page 298
IDABVSM	Database Activity, VSAM Buffer Pool Level (interval)	
IDABOSMR	Database Activity, OSAM Buffer Pool Level (realtime)	Page 300
IDABOSM	Database Activity, OSAM Buffer Pool Level (interval)	

Accessing the IMS Database Activity Views

The easiest way to access the IMS database activity views is by hyperlinking from one of the Database Activity options in an IPSM Easy Menu (EZIMS, EZISSI, or EZIFAST).

You can also display any of the views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting the view from the list displayed.

Analyzing a Data Sharing Group

To analyze a data sharing group, begin with IDAGDTLR (for realtime) or IDAGDTL (for interval). You can easily hyperlink to these views from the EZISSI Easy Menu.

To look at multiple data sharing groups, begin with IDAGSUMR (for realtime) or IDAGSUM (for interval).

Hyperlinking from highlighted fields in the IDAGDTLR or IDAGDTL view is an easy way to go to other views showing related information.

Note: To get accurate information for a data sharing group, be sure to set your context to include all IMS systems defined in that share group. To set context, use the CONtext command within one of the Easy Menus, such as EZIMS or EZISSI, before you access a specific view.

If you do not know which context name to use, you can try using CONtext ALL. That command will display information from every accessible IMS system, which may include IMS systems that are not part of your data sharing group.

Analyzing an Individual IMS

To analyze one or more specific IMS systems, choose the IMS system with the CONtext command. Then begin with IDASSUMR (for realtime) or IDASSUM (for interval). You can easily hyperlink to those views from the Database Activity option in the EZIMS, EZISSI, or EZIFAST Easy Menu.

From the IDASSUMR or IDASSUM view, hyperlink from any row in the IMS Name column to go to the Database Activity Detail view, IDASDTLR (for realtime) or IDASDTL (for interval). This view provides detailed information for the selected IMS system, including information that is not available in other views:

- 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

This additional information helps you interpret the averages, rates, and totals reported in the other fields.

Another way to analyze an individual IMS is to bypass the IDASDTLR or IDASDTL view. You can hyperlink from various highlighted fields within the IDASSUMR or IDASSUM view to go directly to the related information shown in other database activity views.

Database Activity Detail View – Data Sharing Group Level

This section describes the Database Activity Detail View – Data Sharing Group Level (IDAGDTLR), which is shown in Figure 222. The view provides information about database I/O activity and DL/I calls for a data sharing group.

You can use this view to analyze I/O information as it relates to logical and physical databases. This view helps you recognize and solve N-way data sharing problems stemming from I/O contention or buffer cross-invalidation. The view shows DL/I call and I/O event totals, rates, and average times.

The IDAGDTLR view will report DEDB activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view does not report MSDB or GSAM database activity or activity caused by background write.

Statistics are summarized by data sharing group. To display the Database Activity Detail View – Data Sharing Group Level, enter IDAGDTLR on any IPSM command line.

Note: Only IMS systems in your context are included in the count in the Num IMS field. If any of the IMSs in your data sharing group are not included in your context, the data you receive will be incomplete.

```
22MAR2004  12:11:22 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDAGDTLR=========(ALL======*=======)22MAR2004==16:09:16====MVIMS====D====1
 Data Sharing Group......      NONE  Sample seconds...........              5.0
 IMS Name(s)............  I8A332CT
 Number of IMS Systems...         1

 --FULL FUNCTION DB I/O--            --- DATABASE CALLS ------
 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
 --DEDB DATABASE I/O ----             DB GHN   Rate...........             0.00
 Total        I/O Seconds      0.04   DB GHNP  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  Databases with calls.....                4

 --ALL DATABASE I/O -----             --- BUFFER POOLS -------
 Databases    with I/O...         5  Worst VSAM Pool Hit Ratio            73.9
 Volumes      with I/O...         8  Worst OSAM Pool Hit Ratio            92.3
```

Figure 222. Database Activity Detail View – Data Sharing Group Level (IDAGDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDAGDTLR view.

Hyperlink from	To see
Number of IMS Systems	IDASSUMR view, which shows statistics for each IMS in the data sharing group
Databases with I/O	IDAPGSMR view, which shows I/O statistics at the physical database level for the data sharing group
Volumes with I/O	IDAVGSMR view, which shows statistics for all DASD volumes incurring I/O in the data sharing group
Databases with calls	IDALGSMR view, where you can see the DL/I call and I/O statistics at the logical database level for the data sharing group
Worst VSAM Pool Hit Ratio	IDABVSMR view, where you can see activity for the VSAM buffer pools used by the data sharing group
Worst OSAM Pool Hit Ratio	IDABOSMR view, where you can see activity for the OSAM buffer pools used by the data sharing group

Database Activity View – IMS System Level

This section describes the Database Activity View – IMS System Level (IDASSUMR), which is shown in Figures 223, 224, and 225. This view provides information about database I/O activity and DL/I calls for one or more IMS systems.

You can use this view to analyze I/O information as it relates to the logical databases. The view helps you recognize and solve N-way data sharing problems stemming from I/O contention or buffer cross-invalidation.

This view shows DL/I call and I/O event totals, rates, and average times for one or more IMS systems. Statistics are summarized by IMS system.

The IDASSUMR view will report DEDB activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view does not report MSDB or GSAM database activity or activity caused by background write.

To display the Database Activity View – IMS System Level, enter IDASSUMR on any IPSM command line.

```
22MAR2004  12:12:42 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDASSUMR=========(ALL======*=======)22MAR2004==12:12:42====MVIMS====D====1
 IMS      Data     Call Call   Call   I/O  I/O   Read Read  Write Write OSAM XI
 Name     ShrGrp   Rate AVG    %I/O   Rate AVG   Rate AVG   Rate  AVG   RdRate
 IMSxxx   IMSNWAY  46.1 0.0012   90.7 48.8 0.001 48.8 0.001   0.0 0.001       0
```

Figure 223. Database Activity View – IMS System Level (IDASSUMR)

```
22MAR2004  12:12:42 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDASSUMR=========(ALL======*=======)22MAR2004==12:12:42====MVIMS====D====1
 IMS      OSAM XI VSAMPool OSAMPool BufferSteal VSAMBckgrd OSAMPurge  GU   GHU
 Name     RdRate  HitRatio HitRatio WriteRate   WriteRate  WriteRate  Rate Rate
 IMSxxx       0.0    63.99    36.93        0.00       0.00      0.00   3.8  26.
```

Figure 224. Database Activity View – IMS System Level, Scrolled Right

```
22MAR2004  12:14:34 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDASSUMR=========(ALL======*=======)22MAR2004==12:12:42====MVIMS====D====1
 IMS      GHU   GHN   GHNP  GN    GNP   ISRT  DLET  REPL  Other IMS  MVS
 Name     Rate  Rate  Rate  Rate  Rate  Rate  Rate  Rate  Rate  ID   Name
 IMSxxx     3.8  26.7   3.8   3.8   3.8   3.8   0.2   0.2   0.2 I8A  SJSC
```

Figure 225. Database Activity View – IMS System Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDASSUMR view.

Hyperlink from	To see
IMS Name	IDASDTLR view, which provides detailed information for the selected IMS system
Data ShrGrp	IDAGSUMR view, which provides the statistics for the data sharing group that the selected IMS belongs to
Call Rate	IDALSUMR view, which shows the DL/I call and I/O statistics at the logical database level for each IMS
I/O Rate	IDAPSUMR view, where you can see the I/O statistics at the physical database level for each IMS
VSAMPoolHitRatio	IDABVSMR view, which provides database I/O activity information for each IMS system, summarized at the VSAM buffer pool level
OSAMPoolHitRatio	IDABOSMR view, which provides database I/O activity information for each IMS system, summarized at the OSAM buffer pool level

Database Activity Detail View

This section describes the Database Activity Detail View (IDASDTLR), which is shown in Figure 226 on page 284. This view provides detailed information about database I/O activity and DL/I calls for a selected IMS system. Statistics are summarized for the selected system.

This view can help you recognize and solve N-way data sharing problems stemming from I/O contention or buffer cross-invalidation. The view shows DL/I call and I/O event totals, rates, and average times. It also provides information that 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

This additional information helps you interpret the averages, rates, and totals reported in the other fields.

The IDASDTLR view will report DEDB database activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view does not report MSDB and GSAM database activity or activity caused by background write.

You can display the Database Activity Detail View in any of the following ways:

- Enter IDASDTLR on any IPSM command line.
- Hyperlink from the Database Activity option in the EZIMS, EZISSI, or EZIFAST Easy Menu.
- Hyperlink from any row in the IMS Name column in the IDASSUMR view.
- Hyperlink from the IMS Name field of the IDAGSUMR view, and then hyperlink from any row in the IMS Name column of the IDASSUMR view.

```
22MAR2004  15:06:14 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IDASDTLR========(ALL======*=======)22MAR2004==15:06:14====MVIMS====D====1
 IMS Name................  I8A332CT  Sample seconds..........              5.0
 IMS ID..................       I8A
 Data Sharing Group......      NONE

 --FULL FUNCTION DB I/O--            --- DATABASE CALLS -----
 Total        I/O Seconds      0.05  DL/I Call Total Seconds.            0.068
 Average      I/O Time...     0.001  DL/I Call AVG Time......           0.0017
 Read         I/O AVG....     0.002  DL/I Call Rate..........             7.75
 Write        I/O AVG....     0.001  DL/I Call Percent I/O...            71.63
 Read         I/O Rate...      4.17  DL/I Call AVG NBR I/O...            0.744
 Write        I/O Rate...      2.78   DB GU    Rate..........             2.58
 Sync Write   I/O Rate...      2.19   DB GHU   Rate..........             1.19
 Read OSAM XI I/O Rate...      0.00   DB GN    Rate..........             0.00
                                      DB GNP   Rate..........             0.00
 --DEDB DATABASE I/O ----             DB GHN   Rate..........             0.00
 Total        I/O Seconds      0.03   DB GHNP  Rate..........             0.00
 Average      I/O Time...     0.002   DB ISRT  Rate..........             2.78
 Read         I/O AVG....     0.002   DB REPL  Rate..........             0.20
 OTHREAD      I/O AVG....     0.001   DB DLET  Rate..........             0.99
 Read         I/O Rate...      1.59   DB OTHER Rate..........             0.00
 OTHREAD      I/O Rate...      1.59  Databases with calls....                4

 --ALL DATABASE I/O -----             --- BUFFER POOLS ------
 Databases    with I/O...         5  VSAM Bufr Pool Hit Ratio             67.4
 Volumes      with I/O...         8  OSAM Bufr Pool Hit Ratio             90.8
```

Figure 226. Database Activity Detail View (IDASDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDASDTLR view.

Hyperlink from	To see
Data Sharing Group	IDAGSUMR view, where you can see the statistics for the data sharing group that the IMS belongs to
Databases with I/O	IDAPSUMR view, where you can see these I/O statistics at the physical database level for each IMS
Volumes with I/O	IDAVSUMR view, where you can see all the DASD volumes that have I/O occurring against them within the current time frame
Databases with calls	IDALSUMR view, where you can see these DL/I call and I/O statistics at the logical database level for each IMS
VSAM Bufr Pool Hit Ratio	IDABVSMR view, which provides database I/O activity information for each IMS system summarized at the VSAM buffer pool level
OSAM Bufr Pool Hit Ratio	IDABOSMR view, which provides database I/O activity information for each IMS system summarized at the OSAM buffer pool level

Tuning Tip: If a database has excessive I/O, a buffer pool may be too small. Use the VSAM Bufr Pool Hit Ratio and the OSAM Bufr Pool Hit Ratio hyperlinks to see information that can help you determine whether you need to increase the size of the buffer pool.

Database Activity View – Logical (PCB) Level

This section describes the Database Activity View – Logical (PCB) Level (IDALSUMR or IDALGSMR), shown in Figures 227, 228, and 229. This view provides statistics about the activity of logical databases.

You can use this view to analyze database I/O and DL/I call information as it relates to the logical databases. It can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, or buffer cross-invalidation.

This 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 this view that report on logical databases may include I/O statistics for one or more physical databases.

The IDALSUMR view will report DEDB database activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view does not report MSDB and GSAM database activity or activity caused by background write.

To display the Database Activity View – Logical (PCB) Level, enter IDALSUMR on any IPSM command line.

```
22MAR2004  12:19:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDALSUMR=========(ALL======*=======)22MAR2004==12:19:09====MVIMS====D====1
 PCB      Physical Call Call    Call   Call  I/O  I/O   Read Read  Write Write
 DBNAME   DBNAME   Rate AVG     %I/O   I/Os  Rate AVG   Rate AVG   Rate  AVG
 DB1H     DB1H     125. 0.00064 20.3    0.10 13.7 0.001 11.9 0.001   1.8 0.001
```

Figure 227. Database Activity View – Logical (PCB) Level (IDALSUMR)

```
22MAR2004  12:19:37 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDALSUMR=========(ALL======*=======)22MAR2004==12:19:09====MVIMS====D====1
 PCB      Write OSAM XI    GU   GHU   GHN   GHNP  GN    GNP   ISRT  DLET  REPL
 DBNAME   AVG   ReadRate   Rate Rate  Rate  Rate  Rate  Rate  Rate  Rate  Rate
 DB1H     0.001      0.0    2.0  53.6   2.0   2.0   2.0   2.0  19.8  19.8  19.8
```

Figure 228. Database Activity View – Logical (PCB) Level, Scrolled Right

```
22MAR2004  12:19:54 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDALSUMR=========(ALL======*=======)22MAR2004==12:19:09====MVIMS====D====1
 PCB      REPL  Other IMS  IMS      Data     MVS
 DBNAME   Rate  Rate  ID   Name     ShrGrp   Name
 DB1H      19.8   2.2 H71H IMSxxx   NONE     SJSD
```

Figure 229. Database Activity View – Logical (PCB) Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDALSUMR view.

Hyperlink from	To see
Physical DBNAME	IDAPSUMR view, where you can see statistics for I/O incurred against the physical databases that were accessed by DL/I calls from this PCB, whatever the PSBs it may be associated with

Database I/O Activity View – Physical Database Level

This section describes the Database I/O Activity View – Physical Database Level (IDAPSUMR or IDAPGSMR), shown in Figures 230, 231, and 232. This view provides information about database I/O activity at the physical database level.

You can use this view to analyze I/O information as it relates to physical databases. The view can help you recognize and solve N-way data sharing problems stemming 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. Buffer pool information is also provided.

The IDAPSUMR view reports DEDB database activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view 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. This can occur (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.

To display the Database I/O Activity View – Physical Database Level, enter IDAPSUMR on any IPSM command line.

```
22MAR2004  12:20:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDAPSUMR=========(ALL======*=======)22MAR2004==12:20:46====MVIMS====D====4
 Physical Database Area/              Num    Read Read  Write Write Pool Pool
 DBNAME   Type     Partition DDNAME   Vols   Rate AVG   Rate  AVG   ID   Type
 DB1H     PHIDAM   DB1H1     DB1H1A        1  6.3 0.001   0.0 0.000 OSM4 OSAM
 DB1H     PHIDAM   DB1H2     DB1H2A        1  4.7 0.001   0.0 0.000 OSM4 OSAM
 DB1H     PINDEX   DB1H2     DB1H2X        1  4.7 0.001   0.0 0.000 XXXX VSM-D
 DB1H     PINDEX   DB1H1     DB1H1X        1  4.7 0.001   0.0 0.000 XXXX VSM-D
```

Figure 230. Database I/O Activity View – Physical Database Level (IDAPSUMR)

```
22MAR2004  12:20:46 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDAPSUMR=========(ALL======*=======)22MAR2004==12:20:46====MVIMS====D====4
 Physical Pool     Buffer   PCB      Average     Average  Average     Average
 DBNAME   Type     Size     DBNAME   NonKeyRead  KeyRead  NonKeyWrite KeyWrite
 DB1H     OSAM         4096 DB1H           0.001    0.000       0.000    0.000
 DB1H     OSAM         4096 DB1H           0.001    0.000       0.000    0.000
 DB1H     VSM-D        2048 DB1H           0.000    0.001       0.000    0.000
 DB1H     VSM-D        2048 DB1H           0.000    0.001       0.000    0.000
```

Figure 231. Database I/O Activity View – Physical Database Level, Scrolled Right

```
22MAR2004  12:22:02 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDAPSUMR=========(ALL======*=======)22MAR2004==12:20:46====MVIMS====D====4
 Physical Average   Average   OSAM XI   IMS  IMS      Data     MVS
 DBNAME   KeyWrite  SyncWrite Read Rate ID   Name     ShrGrp   Name
 DB1H         0.000     0.000       0.0 H71H IMSxxx   IMSNWAY  SJSC
 DB1H         0.000     0.000       0.0 H71H IMSxxx   IMSNWAY  SJSC
 DB1H         0.000     0.000       0.0 H71H IMSxxx   IMSNWAY  SJSC
 DB1H         0.000     0.000       0.0 H71H IMSxxx   IMSNWAY  SJSC
```

Figure 232. Database I/O Activity View – Physical Database Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDAPSUMR view.

Hyperlink from	**To see**
Physical DBNAME	IDBSUMR view, which shows database status and provides commands for database management.
Num Vols	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. You can use the IDAXSUMR view to see more specifically where the I/O is occurring within a specific volume or VSAM component.
Pool ID	IDABVDTR view (for VSAM databases) or IDABODTR view (for OSAM databases). The IDABVDTR and IDABODTR views show buffer pool activity for the selected buffer pool.

Database I/O Activity View – Database/Volume Level

This section describes the Database I/O Activity View – Database/Volume Level (IDAXSUMR or IDAXGSMR), shown in Figures 233, 234, 235, and 236. This view provides information about database I/O activity at the VSAM component and database volume level.

You can use this 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. The view can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view summarizes information by database, with one row for each volume that the database occupies. If a database occupies more than one volume, there will be more than one line per database. The view shows I/O totals, rates, and average times. Buffer pool information is also provided.

The IDAXSUMR view reports DEDB database activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view 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.

To display the Database I/O Activity View – Database/Volume Level, enter IDAXSUMR on any IPSM command line.

```
22MAR2004  12:22:33 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDAXSUMR=========(ALL======*=======)22MAR2004==12:22:33====MVIMS====D====4
 Physical Database Area/                           Read Read  Write Write Pool
 DBNAME   Type     Partition DDNAME   Type  VOLSER Rate AVG   Rate  AVG   ID
 DB1H     PHIDAM   DB1H1     DB1H1A   OSAM  BAB321  4.9 0.001   0.0 0.000 OSM4
 DB1H     PHIDAM   DB1H2     DB1H2A   OSAM  BAB321  3.7 0.001   0.0 0.000 OSM4
 DB1H     PINDEX   DB1H2     DB1H2X   VSM-D BAB305  3.7 0.001   0.0 0.000 XXXX
 DB1H     PINDEX   DB1H1     DB1H1X   VSM-D BAB305  3.7 0.001   0.0 0.000 XXXX
```

Figure 233. Database I/O Activity View – Database/Volume Level (IDAXSUMR)

```
22MAR2004  12:23:08 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDAXSUMR=========(ALL======*=======)22MAR2004==12:22:33====MVIMS====D====4
 Physical Pool Pool  Number  Buffer          Nonkey  Key     NonKey   Key
 DBNAME   ID   Type  Buffers Size   Fixed    ReadAVG ReadAVG WriteAVG WriteAVG
 DB1H     OSM4 OSAM        5   4096 BFR,BLK    0.001   0.000    0.000    0.000
 DB1H     OSM4 OSAM        5   4096 BFR,BLK    0.001   0.000    0.000    0.000
 DB1H     XXXX VSM-D       5   2048 BFR,BLK    0.000   0.001    0.000    0.000
 DB1H     XXXX VSM-D       5   2048 BFR,BLK    0.000   0.001    0.000    0.000
```

Figure 234. Database I/O Activity View – Database/Volume Level, Scrolled Right

```
22MAR2004  12:23:35 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDAXSUMR=========(ALL======*=======)22MAR2004==12:22:33====MVIMS====D====4
 Physical Key      Sync     OSAM XI   Low      High     IMS  IMS      Data
 DBNAME   WriteAVG WriteAVG Read Rate RBA/RBN  RBA/RBN  ID   Name     ShrGrp
 DB1H        0.000    0.000       0.0        0       18 H71H IMSxxx   IMSNWAY
 DB1H        0.000    0.000       0.0        0       18 H71H IMSxxx   IMSNWAY
 DB1H        0.000    0.000       0.0        0    347FF H71H IMSxxx   IMSNWAY
 DB1H        0.000    0.000       0.0        0    347FF H71H IMSxxx   IMSNWAY
```

Figure 235. Database I/O Activity View – Database/Volume Level, Scrolled Right Again

```
22MAR2004  12:23:56 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDAXSUMR=========(ALL======*=======)22MAR2004==12:22:33====MVIMS====D====4
 Physical Data     MVS
 DBNAME   ShrGrp   Name
 DB1H     IMSNWAY  SJSC
 DB1H     IMSNWAY  SJSC
 DB1H     IMSNWAY  SJSC
 DB1H     IMSNWAY  SJSC
```

Figure 236. Database I/O Activity View – Database/Volume Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDAXSUMR view.

Hyperlink from	**To see**
Physical DBNAME	IDBSUMR view, which shows database status and provides commands for database management.
VOLSER	IDAVSUMR view, where you can see statistics for all I/O to this volume, not just to this database. In the IDAVSUMR view you can see how much of the I/O total is occurring to the volume
Pool ID	IDABVDTR view (for VSAM databases) or IDABODTR view (for OSAM databases), which show buffer pool activity for the selected buffer pool.

Database I/O Activity View – Volume Level

This section describes the Database I/O Activity View – Volume Level (IDAVSUMR or IDAVGSMR), shown in Figures 237 and 238. This view provides database I/O activity information at the volume level.

You can use this view to analyze I/O information as it relates to the volumes. The view can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view 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 will report DEDB database activity on IMS 7.1 and later if the Event Collector parameter DBFPLVL is set to collect DEDB activity. The view 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.

To display the Database I/O Activity View – Volume Level, enter IDAVSUMR on any IPSM command line.

```
22MAR2004  12:26:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDAVSUMR=========(ALL======*=======)22MAR2004==12:26:00====MVIMS====D====2
        Physical           Read Read    Write Write   Nonkey  Key     NonKey
 VOLSER DBNAME    DDNAME   Rate AVG     Rate  AVG     ReadAVG ReadAVG WriteAVG
 BAB321 DB1H      DB1H1***  7.7   0.003   1.7   0.002   0.003   0.000    0.002
 BAB305 DB1H      DB1H1X    3.9   0.002   0.0   0.000   0.000   0.002    0.000
```

Figure 237. Database I/O Activity View – Volume Level (IDAVSUMR)

```
22MAR2004  12:26:21 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDAVSUMR=========(ALL======*=======)22MAR2004==12:26:00====MVIMS====D====2
        NonKey   Key      Syncpt   OSAM XI   IMS  IMS      Data     MVS
 VOLSER WriteAVG WriteAVG WriteAVG Read Rate ID   Name     ShrGrp   Name
 BAB321    0.002    0.000    0.000       0.0 H71H IMSxxx   NONE     SJSD
 BAB305    0.000    0.000    0.000       0.0 H71H IMSxxx   NONE     SJSD
```

Figure 238. Database I/O Activity View – Volume Level, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDAVSUMR view.

Hyperlink from	To see
Physical DBNAME	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. With the IDAXSUMR view, you can see more specifically where the I/O is occurring within a specific volume or VSAM component.

Database Activity Detail View – VSAM Buffer Pool Level

This section describes the Database Activity Detail View – VSAM Buffer Pool Level (IDABVDTR), which is shown in Figure 239. This view provides information about a selected VSAM buffer pool, including definitions, specifications, utilization, and database I/O activity.

The 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.

The view 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 this view to optimize a buffer pool definition by checking to see if a pool needs more buffers. The view shows you 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.

To display the Database Activity Detail View – VSAM Buffer Pool Level, enter IDABVDTR on any IPSM command line.

```
22MAR2004  12:26:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDABVDTR=========(ALL======*=======)22MAR2004==16:43:54====MVIMS====D====1
  BUFFER POOL DEFINITION....            Sample Seconds.........         5
  VSAM Pool ID..............     XXXX   IMS ID.................      H71H
  VSAM Pool Number..........        4   IMS Name...............    IMSxxx
  Pool Type.................     DATA   MVS Name...............      SJSC
  Buffer Fix Options........  BFR,BLK   Data Sharing Group.....      NONE
  Buffer Size...............     4096   Databases with I/O.....      DB1H
  Number Buffers............        5   DD Names...............  DB1H****
  Number Hiperspace Buffers.        5   VOLSERs................    BAB3**

  BUFFER POOL STATISTICS....            RELATED I/O STATISTICS.
  Hit Ratio.................   100.00   Read  I/O Rate.........      0.00
  Hiperspace Hit Ratio......     0.00   Write I/O Rate.........      0.00
  Average Time In Pool......        ?   Sync  Write Rate.......      0.00
  CI Search Rate............   409.05   Background Write Rate..      0.00
  Successful Hprs Read Rate.     0.00   Buffer Steal Write Rate      0.00
  Failed Hprs Read Rate.....     0.00
  Successful Hprs Write Rate     0.00
  Failed Hprs Write Rate....     0.00
```

Figure 239. Database Activity Detail View – VSAM Buffer Pool Level (IDABVDTR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDABVDTR view.

Hyperlink from	To see
Database with I/O	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. You can use the IDAXSUMR view to see more specifically where the I/O is occurring within a specific volume or VSAM component.

Database Activity Detail View – OSAM Buffer Pool Level

This section describes the Database Activity Detail View – OSAM Buffer Pool Level (IDABODTR), which is shown in Figure 240. This view provides information about a selected OSAM buffer pool, including definitions, specifications, utilization, and database I/O activity.

The 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 using the specified buffer pool.

The view 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 this view to optimize a buffer pool definition by checking to see if a pool needs more buffers. The view shows you 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.

To display the Database Activity Detail View – OSAM Buffer Pool Level, enter IDABODTR on any IPSM command line.

```
22MAR2004  12:26:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IDABODTR=========(ALL======*=======)22MAR2004==16:43:54====MVIMS====D====1
  BUFFER POOL DEFINITION                  Sample Seconds.........           5
  OSAM Pool ID..........           OSM4   IMS ID................        H71H
  Buffer Fix Options....        BFR,BLK   IMS Name...............      IMSxxx
  OSAM Cache Option.....        NoCache   MVS Name...............        SJSC
  Buffer Size...........           4096   Data Sharing Group.....        NONE
  Number Buffers........              5   Databases with I/O.....        DB1H
                                          DD Names...............    DB1H****
                                          VOLSERs................      BAB321

  BUFFER POOL STATISTICS                  RELATED I/O STATISTICS.
  Hit Ratio.............          30.06   Read I/O Rate..........       72.46
  OSAM Cache Hit Ratio..            N/A   Write I/O Rate.........        0.00
  OSAM Cache Search Rate            N/A   Sync Write Rate........        0.00
  Average Time In Pool..           0.02   Buffer Steal Write Rate        0.00
  OSAM Block Search Rate         310.78   Purge Write Rate.......        0.00
  OSAM XI IO Rate.......           0.00   SB Async Seq Read Rate.        0.00
                                          SB Sync Seq Read Rate..        0.00
```

Figure 240. Database Activity Detail View – OSAM Buffer Pool Level (IDABODTR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDABODTR view.

Hyperlink from	To see
Database with I/O	IDAXSUMR view, where you can see the statistics broken down by OSAM component and volume. You can use the IDAXSUMR view to see more specifically where the I/O is occurring within a specific volume or VSAM component.

Database Activity View – VSAM Buffer Pool Level

This section describes the Database Activity View – VSAM Buffer Pool Level (IDABVSMR), which is shown in Figures 241, 242, and 243. This view provides database I/O activity information for VSAM databases summarized at the buffer pool level.

You can use this view to analyze I/O information as it relates to buffer pools. The view helps you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view shows I/O totals, rates, and average times for all open VSAM databases.

To display the Database Activity View – VSAM Buffer Pool Level, enter IDABVSMR on any IPSM command line.

```
22MAR2004  12:36:15 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDABVSMR=========(ALL======*=======)22MAR2004==12:36:15====MVIMS====D====5
 VSAM    Pool Bufr  Num  Srch Hit   Hprsp HprHit AVGTime Databases Read  Write
 Pool ID Type Size  Bufr Rate Ratio Bufr  Ratio  InPool  with I/O  Rate  Rate
 XXXX    DATA  2048    5 1.89  25.4     0   0.00    3.55 DB1H        0.5  0.00
 XXXX    DATA   512    5 0.00   0.0     0   0.00       ?             0.0  0.00
 XXXX    DATA  1024    5 0.00   0.0     0   0.00       ? DB1H        0.0  0.00
 XXXX    DATA  4096    5 1.89 100.0     5   0.00       ? DB1H        0.0  0.00
 XXXX    DATA  8192    5 0.00   0.0     5   0.00       ?             0.0  0.00
```

Figure 241. Database Activity View – VSAM Buffer Pool Level (IDABVSMR)

```
22MAR2004  12:36:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDABVSMR=========(ALL======*=======)22MAR2004==12:36:15====MVIMS====D====5
 VSAM    Write Read  Write Syncpt     BufrSteal  Bckground  SuccHpr   FailHpr
 Pool ID Rate  AVG   AVG   WriteRate  WriteRate  WriteRate  ReadRate  ReadRate
 XXXX     0.00 0.001 0.000     0.000       0.00       0.00      0.00      0.00
 XXXX     0.00 0.000 0.000     0.000       0.00       0.00      0.00      0.00
 XXXX     0.00 0.000 0.000     0.000       0.00       0.00      0.00      0.00
 XXXX     0.00 0.000 0.000     0.000       0.00       0.00      0.00      0.00
 XXXX     0.00 0.000 0.000     0.000       0.00       0.00      0.00      0.00
```

Figure 242. Database Activity View – VSAM Buffer Pool Level, Scrolled Right

```
22MAR2004  12:37:12 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDABVSMR=========(ALL======*=======)22MAR2004==12:36:15====MVIMS====D====5
 VSAM     FailHpr  SuccHpr   FailHpr            Data     IMS  IMS      MVS
 Pool ID  ReadRate WriteRate WriteRate Fixed    ShrGrp   ID   Name     Name
 XXXX         0.00      0.00      0.00 BFR,BLK  IMSNWAY  H71H IMSxxx   SJSC
 XXXX         0.00      0.00      0.00 BFR,BLK  IMSNWAY  H71H IMSxxx   SJSC
 XXXX         0.00      0.00      0.00 BFR,BLK  IMSNWAY  H71H IMSxxx   SJSC
 XXXX         0.00      0.00      0.00 BFR,BLK  IMSNWAY  H71H IMSxxx   SJSC
 XXXX         0.00      0.00      0.00 BFR,BLK  IMSNWAY  H71H IMSxxx   SJSC
```

Figure 243. Database Activity View – VSAM Buffer Pool Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDABVSMR view.

Hyperlink from	**To see**
VSAM Pool ID	IDABVDTR view, where you can see a detailed view of the same buffer pool.
Databases with I/O	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. With the IDAXSUMR view, you can see more specifically where the I/O is occurring within a specific volume or VSAM component.

Database Activity View – OSAM Buffer Pool Level

This section describes the Database Activity View – OSAM Buffer Pool Level (IDABOSMR), which is shown in Figures 244, 245, and 246. This view provides database I/O activity information for OSAM databases, summarized at the buffer pool level.

You can use this view to analyze I/O information as it relates to buffer pools. The view helps you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view shows I/O totals, rates, and average times for all open OSAM databases.

To display the Database Activity View – OSAM Buffer Pool Level, enter IDABOSMR on any IPSM command line.

```
22MAR2004  12:37:12 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IDABOSMR=========(ALL======*=======)22MAR2004==12:36:15====MVIMS====D====4
 OSAM    Bufr  Num   Srch Hit   OSAMCach OSAMCach AvgTime Databases Read  Write
 Pool ID Size  Bufrs Rate Ratio HitRatio Option   In Pool With I/O  Rate  Rate
 OSM4     4096     5 84.2 39.84     0.00 All         0.10 DB1H      16.90  0.00
 (none)   1024     5 0.00  0.00      N/A NoCache                     0.00  0.00
 (none)   2048     5 0.00  0.00      N/A NoCache                     0.00  0.00
 (none)   8192     5 0.00  0.00      N/A NoCache                     0.00  0.00
```

Figure 244. Database Activity View – OSAM Buffer Pool Level (IDABOSMR)

```
22MAR2004  12:36:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDABOSMR=========(ALL======*=======)22MAR2004==12:36:15====MVIMS====D====4
 OSAM    Write Read  Write Syncpt    BufrSteal Purge     SBAsyncSeq SBSyncSeq
 Pool ID Rate  AVG   AVG   WriteRate WriteRate WriteRate ReadRate   ReadRate
 OSM4     0.00 0.001 0.000      0.00      0.00      0.02       0.00       0.00
 (none)   0.00 0.000 0.000      0.00      0.00      0.00       0.00       0.00
 (none)   0.00 0.000 0.000      0.00      0.00      0.00       0.00       0.00
 (none)   0.00 0.000 0.000      0.00      0.00      0.00       0.00       0.00
```

Figure 245. Database Activity View – OSAM Buffer Pool Level, Scrolled Right

```
22MAR2004  12:37:12 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
+W1 =IDABOSMR=========(ALL======*=======)22MAR2004==12:36:15====MVIMS====D====4
 OSAM    SBSyncSeq   Buffer Fix     Data     IMS  IMS      MVS
 Pool ID ReadRate    Settings       ShrGrp   ID   Name     Name
 OSM4          0.00 BFR,BLK        IMSNWAY  H71H IMSxxx   SJSC
 (none)        0.00 BFR,BLK        IMSNWAY  H71H IMSxxx   SJSC
 (none)        0.00 BFR,BLK        IMSNWAY  H71H IMSxxx   SJSC
 (none)        0.00 BFR,BLK        IMSNWAY  H71H IMSxxx   SJSC
```

Figure 246. Database Activity View – OSAM Buffer Pool Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDABOSMR view.

Hyperlink from	To see
OSAM Pool ID	IDABODTR view, where you can see a detailed view of the same buffer pool.
Databases with I/O	IDAXSUMR view, where you can see the statistics broken down by OSAM component and volume. With the IDAXSUMR view, you can see more specifically where the I/O is occurring within a specific volume or OSAM component.

Chapter 19. Managing Shared Message Queues

This chapter describes the CQS (Common Queue Service) information views, which you can use to manage and solve problems with IMS shared message queuing. With the views, you can determine

- the CQS configuration (ISQSUMR and ISQDTLR views)
- the total messages (ISQSTR view)
- which queue types are having problems (ISQQTR view)
- which queues are building up (ISQINR and ISQOUTR views)

You can easily

- check configuration and status, such as how the structures and CQS are defined for the IMS (ISQSUMR or ISQDTLR view)
- check performance information, such as the number of tasks for IMS that are waiting for services from a CQS (ISQDTLR view)
- drill down to see which messages are on the shared queues (ISQSTR or ISQQTR view)

Message information is provided by structure type, queue type, and individual queue name, which helps you determine the status of the shared queues and solve problems in diverse situations, such as when a shared message queue structure is in Rebuild or overflow.

The following CQS information views are provided:

View name	Description
ISSIQUES	Shared Queues Group IMS Structure
ISQSUMR	Shared Message Queue Information
ISQDTLR	Shared Message Queue Detail
ISQSTR	Messages by Structure
ISQSTAR	Messages by Structure with Message Ages
ISQQTR	Messages by Queue Type
ISQQTAR	Messages by Queue Type with Message Ages
ISQINR	Input Messages by Queue Name
ISQINAR	Input Messages by Queue Name with Message Ages
ISQOUTR	Output Messages by Queue Name
ISQOUTAR	Output Messages by Queue Name with Message Ages
ISQOWNER	Messages by IMS Owner
ISQMR	Queue Menu

Accessing the CQS Information Views

You can display the CQS information views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting from the list of views.

You can also hyperlink to the CQS information views from the IMS Easy Menu (EZIMS), the IMS Sysplex Easy Menu (EZISSI), and the IMS Fast Menu (EZIFAST).

Shared Message Queue Data Collection

When the MVIMS Shared Queues Data Server is operating, the messages by structure, queue type, and queue name views provide shared queue statistics for IMS systems that use shared message queues. When the Shared Queues Data Server is not operating, the letters SMQ are displayed in the statistics fields for IMS systems that use shared queues.

You can use the parameter ISQQUERY in BBPARM member IMFBEX00 to turn the Shared Queues Data Server off or on and to control its data refresh rates. For more information about the parameter, see Chapter 23, “Controlling Shared Message Queue Data Collection” on page 335.

Shared Queues Group IMS Structure View

This section describes the Shared Queues Group IMS Structure view (ISSIQUES), which is shown in Figure 247. The ISSIQUES view provides an overview of the number and status of the IMS systems in each shared queues group.

This view is summarized by shared queues group name. Each row shows the number of IMS systems in a shared queues group, the status of the IMS systems (asterisks if they have different statuses), and IMS names and types.

To display the Shared Queues Group IMS Structure view, enter ISSIQUES on any command line in IPSM. You can also hyperlink to ISSIQUES from the Structures and Queues option in the EZIMS and EZISSI menus and from the SMQ Structures option in the EZIFAST menu.

```
22MAR2004  12:20:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISSIQUES==========IMSxxx===*========22MAR2004==12:20:36====MVIMS====D====2
 Shared Queues Hyperlink  Hyperlink   Number of   Status of    IMS      IMS
 Group Name    to:        to:         IMS Systems IMS Systems  Names    Types
 DFSXCFGP      Input Msgs Output Msgs           4 Active       IMSxxx   TM/DB
 DCSXCFGP      Input Msgs Output Msgs           2 Inactive     IMSxxx   TM/DB
```

Figure 247. Shared Queues Group IMS Structure View (ISSIQUES)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISSIQUES view.

Hyperlink from	To see
Shared Queues Group Name	ISQSUMR view, which provides definitional and performance information about shared message queue structures and CQS for the selected shared queues group
Hyperlink to: Input Msgs	ISQINR view, which provides information about all the transaction type queues in the selected shared queues group
Hyperlink to: Output Msgs	ISQOUTR view, which provides information about all the LTERM type queues in the selected shared queues group

Shared Message Queue Information View

This section describes the Shared Message Queue Information view (ISQSUMR), which is shown in Figures 248, 249, and 250. You can use the ISQSUMR view to check status and other information about the shared message queue structures that your IMS accesses and the CQS that manages those structures.

The Shared Message Queue Information view

- displays both definitional and performance information
- identifies the structure and overflow structure name, status, and type
- shows the connection and registration tokens
- shows whether the structure quiesces during rebuild (Wait for Rebuild attribute)
- identifies the CQS ID, jobname, version, procedure, status, and backlog
- shows number of sync blocks and the short and long message size
- identifies IMS ID, IMS jobname, and OS/390 name

The ISQSUMR view is useful for determining what structures you are using, what structures you need to look at, and the condition of your structures (for instance, if a structure is waiting for Rebuild or if there is a backlog).

After using the ISQSUMR view to get information about a structure, you can investigate further by displaying the Messages by Structure, Messages by Queue Type, and Messages by Queue Name views, which are described later in this chapter.

To display the Shared Message Queue Information view, enter ISQSUMR on any command line in IPSM. You can also hyperlink from the Shared Queues Group Name in the ISSIQUES view.

```
22MAR2004  13:55:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISSIQUES=ISQSUMR==X19H=====*========22MAR2004==13:55:01====MVIMS====D====2
CM Primary          OverFlow         Str Str   Shared Q W-R IMS  CQS      CQS
-- Structure Name   Structure Name   Typ Stat  Group    Bld SSID Jobname  Statu
   IMS_CQS_EMH2     IMS_CQS_EMHO2    EMH AVAIL DFSXCFGP NO  X71H IMSCQS7  ACTIV
   IMS_CQS_MSG2     IMS_CQS_MSGO2    MSG AVAIL DFSXCFGP YES X71H IMSCQS7  ACTIV
```

Figure 248. Shared Message Queue Information View (ISQSUMR)

```
22MAR2004  14:01:26 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
+W1 =ISSIQUES=ISQSUMR==X19H=====*========22MAR2004==14:01:26====MVIMS====D====2
CM Primary          CQS      CQS      IMS      MVS  CQS  CQS  SYNC SHRT LONG CQ
-- Structure Name   Status-  Procname Jobname  SSID SSID BLOG BLKS M-SZ M-SZ Ve
   IMS_CQS_EMH2     ACTIVE   IMSCQS7  IMSxxx   SJSD CQS             296 3320 10
   IMS_CQS_MSG2     ACTIVE   IMSCQS7  IMSxxx   SJSD CQS             296 3320 10
```

Figure 249. Shared Message Queue Information View, Scrolled Right

```
22MAR2004  14:01:43 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
<W1 =ISSIQUES=ISQSUMR==X19H=====*========22MAR2004==14:01:43====MVIMS====D====2
CM Primary          CQS  Connection       Registration
-- Structure Name   Ver  Token            Token
   IMS_CQS_EMH2     1020 0216BCEA357E62D8 13686A28B6BCEA5A
   IMS_CQS_MSG2     1020 0216BCEA357E62D7 13686A28B6BCEA5A
```

Figure 250. Shared Message Queue Information View, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQSUMR view.

Hyperlink from	To see
Primary Structure Name	ISQDTLR view, which provides detailed shared message queue information for the selected structure
Str Typ	ISQSTR view, which shows the total number of messages queued for the selected structure

Shared Message Queue Detail View

This section describes the Shared Message Queue Detail view (ISQDTLR), which is shown in Figure 251. You can use the ISQDTLR view to check status and other information about a selected shared message queue structure and the CQS that manages the structure

The Shared Message Queue Detail view

- displays both definitional and performance information
- identifies the structure and overflow structure name, status, and type
- shows the connection and registration tokens and whether the structure quiesces during rebuild (Wait for Rebuild attribute)
- identifies the CQS ID, jobname, version, procedure, status, and backlog
- shows number of sync blocks and the short and long message size
- identifies IMS ID, IMS jobname, and OS/390 name

This view is useful for determining the condition of your shared message queue structures (their status, whether they are waiting for Rebuild, whether there is a backlog). After you use the view to check the condition of your shared message queue structures, you can investigate further by displaying the Messages by Structure, Messages by Queue Type, and Messages by Queue Name views, described later in this chapter.

To display the Shared Message Queue Detail view, enter ISQDTLR on any command line in IPSM. You can also hyperlink to this view from the Primary Structure Name field in the ISQSUMR view.

```
22MAR2004  16:07:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =ISQSUMR==ISQDTLR==X19H=====*========22MAR2004==16:07:41====MVIMS====D====1
   Primary Struc Name.      IMS_CQS_EMH CQS Backlog...
   OverFlow Struc Name                  Sync Blks.....
   Structure Type.....              EMH
   Stucture Status....            AVAIL
   Wait for ReBuild...               NO Short Msg Size              296
   Shared Q Group.....         DFSXCFGP Long Msg Size.             3320
   CQS Status.........           ACTIVE CQS Version...            10100
   CQS Jobname........          IMSCQSX Conn Token.... 020F4804C1F5FEE8
   CQS SSID...........             CQSX Reg Token..... 0F566018AF4804E9
   CQS Proc Name......          IMSCQSX
   IMS Jobname........           IMSxxx
   IMS SSID...........             X19H
   MVS SSID...........             SYSC
```

Figure 251. Shared Message Queue Detail View (ISQDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

Messages by Structure View

This section describes the Messages by Structure view (ISQSTR), which is shown in Figure 252. This view provides an overview of the contents of each shared message queue structure type.

The ISQSTR view is summarized by structure type. Each row shows the total number of messages queued for an individual structure type. You can hyperlink from the ISQSTR Oldest Date field to display the ISQSTAR view, which shows the date and timestamp of the oldest and newest messages queued on the selected structure type.

The ISQSTR view is useful for determining what type of structure you need to look at to see what is responsible for a buildup of messages.

To display the Messages by Structure view, enter ISQSTR on any command line in IPSM. You can also hyperlink to this view from the Str Typ field in the ISQSUMR view.

```
22MAR2004  12:20:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISSIQUES=ISQSTR===IMSxxx===*========22MAR2004==12:20:36====MVIMS====D====2
 Stru Total Owner |-- Oldest ----| |-- Newest ----| Shared Queues
 Type Cnt   IMSID  Date      Time   Date      Time  Group Name
 MSGQ     4 (any)  hyperlink  for  date/time        DFSXCFGP
 EMHQ     1 (any)  hyperlink  for  date/time        DFSXCFGP
```

Figure 252. Messages by Structure View (ISQSTR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQSTR view.

Hyperlink from	To see
Total Cnt	ISQQTR view, which provides information about the messages queued for each of the queue types on the selected structure type
Oldest Date	ISQSTAR view, which provides a date and timestamp of the oldest and newest messages queued on the selected structure type

Messages by Structure with Message Ages View

This section describes the Messages by Structure with Message Ages view (ISQSTAR), which is shown in Figure 253. The ISQSTAR view provides a date and timestamp for the oldest and newest messages in the structure type selected in the ISQSTR view.

To display the Messages by Structure with Message Ages view, enter ISQSTAR on any command line in IPSM. You can also hyperlink to the view from the Oldest Date field in the ISQSTR view.

```
22MAR2004  12:20:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISQSTR===ISQSTAR==IMSxxx===*========22MAR2004==12:20:36====MVIMS====D====1
 Stru Total Owner |-- Oldest ----| |-- Newest ----| Shared Queues
 Type Cnt   IMSID  Date      Time   Date      Time  Group Name
 MSGQ     4 (any) 22MAR2004  11:21 22MAR2004  12:02 DFSXCFGP
```

Figure 253. Messages by Structure with Message Ages View (ISQSTAR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in the view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the ISQSTAR view.

Hyperlink from	To see
Total Cnt	ISQQTAR view, which provides information about the messages queued for each of the queue types on the selected structure type and includes the data and timestamp for the oldest and newest messages on the queues

Messages by Queue Type View

This section describes the Messages by Queue Type view (ISQQTR), which is shown in Figure 254. The ISQQTR view provides the same information as the ISQSTR view, but at a finer level of detail.

Shared message queue structure information is summarized by queue type. Each row shows the total number of messages queued for a specific queue type. You can hyperlink from the ISQQTR Oldest Date field to display the ISQQTAR view, which shows the date and timestamp for the oldest and newest messages on all the queue types displayed in the ISQQTR view.

The ISQQTR view is useful for determining whether work is coming in, whether incoming work is getting processed, and if there are messages on the shared message queue waiting to be sent or dequeued.

To display the Messages by Queue Type view, enter ISQQTR on any command line in IPSM. You can also hyperlink to the view from the Total Cnt field in the ISQSTR view.

```
22MAR2004  11:56:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISQSTR===ISQQTR===IMSxxx===*========22MAR2004==11:56:13====MVIMS====D====3
 Queue        Stru Total Owner |-- Oldest ----| |-- Newest ----| Shared Queues
 Type         Type Cnt   IMSID  Date      Time   Date      Time  Group Name
 Lterm Ready  MSGQ     5 (any)  hyperlink  for  date/time        DFSXCFGP
 Tran Suspend MSGQ     8 (any)  hyperlink  for  date/time        DFSXCFGP
 Tran Ready   MSGQ   864 (any)  hyperlink  for  date/time        DFSXCFGP
```

Figure 254. Messages by Queue Type View (ISQQTR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQQTR view.

Hyperlink from	To see
Total Cnt	ISQINR view (for transaction queue types) or ISQOUTR view (for LTERM queue types), which provide information about the messages on the queues of the selected queue type
Oldest Date	ISQQTAR, which provides a date and timestamp for the oldest and newest messages on all the queue types displayed in the ISQQTR view

Messages by Queue Type with Message Ages View

This section describes the Messages by Queue Type with Message Ages view (ISQQTAR), which is shown in Figure 255.

You can hyperlink from the Oldest Date field in the ISQQTR view, to display the ISQQTAR view with a date and timestamp for the oldest and newest messages on all the queue types displayed in the ISQQTR view.

You can also display the view by entering ISQQTAR on any command line in IPSM. You can hyperlink to the view from the Total Cnt field in the ISQSTAR view and from the Oldest Date field in the ISQQTR view.

```
22MAR2004  11:56:13 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISQSTR===ISQQTR===IMSxxx===*========22MAR2004==11:56:13====MVIMS====D====3
 Queue        Stru Total Owner |-- Oldest ----| |-- Newest ----| Shared Queues
 Type         Type Cnt   IMSID  Date      Time   Date      Time  Group Name
 Lterm Ready  MSGQ     5 (any)  hyperlink  for  date/time        DFSXCFGP
 Tran Suspend MSGQ     8 (any)  hyperlink  for  date/time        DFSXCFGP
 Tran Ready   MSGQ   864 (any)  hyperlink  for  date/time        DFSXCFGP
```

Figure 255. Messages by Queue Type with Message Ages View (ISQQTAR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in the view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the ISQQTAR view.

Hyperlink from	To see
Total Cnt	ISQINR view (for transaction queue types) or ISQOUTR view (for LTERM queue types), which provide information about the messages on the queues of the selected queue type

Input Messages by Queue Name View

This section describes the Input Messages by Queue Name view (ISQINR), which is shown in Figure 256. This view provides the same information for input messages as the ISQQTR view, but at a finer level of detail.

Information is summarized by individual queue. Each row shows the queue name, the queue type, and the total number of input messages on the queue.

Note: Whether you have specified a single target or set your target to include multiple IMS systems (for example, using the SSI CONtext ALL command), the information returned to this view by the Coupling Facility will be the same. Because messages are kept by CQS rather than by individual IMS systems (and thus include messages associated with all IMS systems), all information shown in the view will be for all IMS systems.

To display the Input Messages by Queue Name view, enter ISQINR on any command line in IPSM. You can also hyperlink to this view from the Total Cnt field in the ISQQTR and ISQQTAR views.

```
22MAR2004  14:37:14 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =ISQQTR===ISQINR===IMSxxx===*========22MAR2004==14:37:14====MVIMS====D==864
 Queue    Queue       Structure Total Owner ShrQueue APPC or OTMA
 Name     Type        Type      Cnt   IMSID Group    N/A
 GBGTRNM1 Tran Ready  MSGQ          1 (any) DFSXCFGP N/A
 TDRIVER  Tran Ready  MSGQ          1 (any) DFSXCFGP N/A
 THDAMINQ Tran Ready  MSGQ          3 (any) DFSXCFGP N/A
 THDAMINQ Tran Ready  MSGQ          2 (any) DFSXCFGP N/A
 THIDMINQ Tran Ready  MSGQ          1 (any) DFSXCFGP N/A
```

Figure 256. Input Messages by Queue Name View (ISQINR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQINR view.

Hyperlink from	To see
Queue Name	ISQMR menu, where you can access additional information about the queue
Total Cnt	ITRSUMR view, where you can check the status of individual transactions and issue line commands against them
Owner IMSID	ISQOWNER view (for queues owned by a single IMS), which provides information about messages that must be processed by a particular IMS in a shared queues group

Input Messages by Queue Name with Message Ages View

This section describes the Input Messages by Queue Name with Message Ages view (ISQINAR), which is shown in Figure 257. This view provides a date and timestamp for the oldest and newest input messages on selected queues.

To display the Input Messages by Queue Name with Message Ages view, enter ISQINAR on any command line in IPSM. You can also hyperlink to ISQINAR from the Oldest/Newest Msg Ages option in the ISQMR Queue Menu.

```
22MAR2004  14:31:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
 CURR WIN ===> 1        ALT WIN ===>
>W1 =ISQINR===ISQINAR==IMSxxx===*========22MAR2004==14:31:36====MVIMS====D====1
 Queue    Queue       Stru Total Owner |- Oldest ----| |- Newest ----| ShrQueue
 Name     Type        Type Cnt   IMSID Date      Time   Date     Time  Group
 GBGTRNM1 Tran Ready  MSGQ     1 (any) 22MAR2004 09:18 22MAR2004 09:18 DFSXCFGP
```

Figure 257. Input Messages by Queue Name with Message Ages View (ISQINAR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in the view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQINAR view.

Hyperlink from	To see
Total Cnt	ITRSUMR view, where you can check the status of individual transactions and issue line commands against them
Owner IMSID	ISQOWNER view (for queues owned by a single IMS), which provides information about messages that must be processed by a particular IMS in a shared queues group

Output Messages by Queue Name View

This section describes the Output Messages by Queue Name view (ISQOUTR), which is shown in Figure 258. This view provides the same information for output messages as the ISQQTR view, but at a finer level of detail.

Information is summarized by individual queue name. Each row shows the total number of output messages queued and the queue type for that specific queue.

Note: Whether you have specified a single target or set your target to include multiple IMS systems (for example, using the SSI CONtext ALL command), the information returned to this view by the Coupling Facility will be the same. Because messages are kept by CQS rather than by individual IMS systems (and thus include messages associated with all IMS systems), all information shown in the view will be for all IMS systems.

To display the Output Messages by Queue Name view, enter ISQOUTR on any command line in IPSM. You can also hyperlink to this view from the Total Cnt field in the ISQQTR and ISQQTAR views.

```
22MAR2004  14:37:14 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISQQTR===ISQOUTR==IMSxxx===*========22MAR2004==14:37:14====MVIMS====D====5
 Queue    Queue       Structure Total Owner ShrQueue APPC or OTMA
 Name     Type        Type      Cnt   IMSID Group    Timestamp
 GBGLTRM1 Lterm Ready MSGQ          1 (any) DFSXCFGP N/A
 GBGLTRM2 Lterm Ready MSGQ          1 (any) DFSXCFGP N/A
 THA1OUTQ Lterm Ready MSGQ          3 (any) DFSXCFGP N/A
 THA3OUTQ Lterm Ready MSGQ          2 (any) DFSXCFGP N/A
 THIDOUTQ Lterm Ready MSGQ          1 (any) DFSXCFGP N/A
```

Figure 258. Output Messages by Queue Name View (ISQINR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQOUTR view.

Hyperlink from	To see
Queue Name	ISQMR menu, where you can access additional information about the queue
Total Cnt	IULTERM view (for LTERM queues), which displays information about the status of the LTERM associated with a terminal or user
Total Cnt	IOTMATRN view (for OTMA queues), which displays OTMA message information
Owner IMSID	ISQOWNER view (for queues owned by a single IMS), which provides information about messages that must be processed by a particular IMS in a shared queues group

Output Messages by Queue Name with Message Ages View

This section describes the Output Messages by Queue Name with Message Ages view (ISQOUTAR), which is shown in Figure 259. This view provides a date and timestamp for the oldest and newest output messages on selected queues.

To display the Output Messages by Queue Name with Message Ages view, enter ISQOUTAR on any command line in IPSM. You can also hyperlink to ISQOUTAR from the Oldest/Newest Msg Ages option in the ISQMR Queue Menu.

```
22MAR2004  14:31:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISQOUTR==ISQOUTAR=IMSxxx===*========22MAR2004==14:31:36====MVIMS====D====1
 Queue    Queue       Stru Total Owner |- Oldest ----| |- Newest ----| ShrQueue
 Name     Type        Type Cnt   IMSID Date      Time   Date     Time  Group
 GBGLTRM1 Lterm Ready MSGQ     1 (any) 22MAR2004 09:18 22MAR2004 09:18 DFSXCFGP
```

Figure 259. Output Messages by Queue Name with Message Ages View (ISQINAR)

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in the view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQOUTAR view.

Hyperlink from	To see
Total Cnt	IULTERM view (for LTERM queues), which displays information about the status of the LTERM associated with a terminal or user
Total Cnt	IOTMATRN view (for OTMA queues), which displays OTMA message information
Owner IMSID	ISQOWNER view (for queues owned by a single IMS), which provides information about messages that must be processed by a particular IMS in a shared queues group

Messages by IMS Owner ID

This section describes the Messages by IMS Owner view (ISQOWNER), which is shown in Figures 260 and 261. The view provides the same information as the ISQQTR view, but at a finer level of detail.

Information is summarized by individual IMS owner ID. Each row shows the total number of messages queued and the queue type for a specific queue. You can hyperlink from the Oldest Date field of an LTERM queue to access the ISQOUTAR view, which shows the date and timestamp for the oldest and newest output messages on the queue. You can hyperlink from the Oldest Date field of a transaction queue to access the ISQINAR view, which shows the date and timestamp for the oldest and newest input messages on the queue.

Note: Whether you have specified a single target or set your target to include multiple IMS systems (for example, using the SSI CONtext ALL command), the information returned to this view by the Coupling Facility will be the same. Because messages are kept by CQS rather than by individual IMS systems (and thus include messages associated with all IMS systems), all information shown in the view will be for all IMS systems.

To display the Messages by IMS Owner ID view, enter ISQOWNER on any command line in IPSM. You can also hyperlink to this view from the Owner IMSID field in the ISQINR, ISQINAR, ISQOUTR, and ISQOUTAR views.

```
22MAR2004  06:51:41 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 >W1 =ISQSTR===ISQOWNER=IMSxxx===*========22MAR2004==06:51:41====MVIMS====D====5
 Owner    Queue            Queue        Total |-- Oldest ----| |-- Newest ----|
 IMSID    Name             Type         Cnt    Date      Time   Date      Time
 (any)    LTERM01          Lterm Ready      1  hyperlink  for  date/time
 (any)    AAA1             Lterm Ready      1  hyperlink  for  date/time
 (any)    AAA2             Lterm Ready      1  hyperlink  for  date/time
 (any)    LTERM03          Lterm Ready      1  hyperlink  for  date/time
 IMS1     GBGTRNM1         Tran Ready       5  hyperlink  for  date/time
```

Figure 260. Messages by IMS Owner ID View (ISQOWNER)

```
22MAR2004  06:57:18 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 >W1 =ISQSTR===ISQOWNER=IMSxxx===*========22MAR2004==06:57:18====MVIMS====D====5
 Owner    ----| Shared Queues
 IMSID    Time  Group Name
 (any)          DFSXCFGP
 (any)          DFSXCFGP
 (any)          DFSXCFGP
 (any)          DFSXCFGP
 IMS1           DFSXCFGP
```

Figure 261. Messages by IMS Owner ID View, Scrolled Right

Note: When you use the CQS messages views, set the context to include all the IMS systems in a *single* shared message queues group (and exclude all IMS systems that are not members of the group).

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the ISQOUTAR view.

Hyperlink from	**To see**
Queue Name	ITRSUMR view (for transaction queues), where you can check the status of individual transactions and issue line commands against them
Queue Name	IULTERM view (for LTERM queues), which displays information about the status of the LTERM associated with a terminal or user
Queue Name	IOTMATRN view (for OTMA queues), which displays OTMA message information
Oldest Date	ISQOUTAR view (for LTERM queue types) or ISQINAR view (for all other queue types), which show the date and timestamp for the oldest and newest messages on a queue

Queue Menu

The Queue Menu (ISQMR), shown in Figure 262, is a starting point for linking to information about specific queues.

When you hyperlink to the Queue Menu from a queue entry on a tabular display, the menu will be filtered on the queue you selected.

You can hyperlink to the ISQMR menu from the Queue Name field in the ISQINR and ISQOUTR views.

```
22MAR2004  15:27:38 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =ISQMR=============IMSxxx===*========22MAR2004==15:27:43====MVIMS====D====1
                                  Queue Menu
                              Timeframe - Realtime

             Queue Name ->  CSQ4ICB3
             Queue Type ->  Tran Ready
         Structure Type ->  MSGQ
           Owner IMS ID ->  (any)
             Group Name ->  DFSMVI81

    Queue Information       +----------------------+    Tools and Menus
  . Oldest/Newest Msg Ages  |   Place cursor on    |  > Utilities
  * Queues Owned by this    |    menu item and     |  > MVIMS Main Menu
    IMS                     |     press ENTER      |  > IMS Easy Menu
                            +----------------------+  > IMS Fast Menu
    Status                                            . Return...
  . Transaction Status
```

Figure 262. Queue Menu (ISQMR)

To use the Queue Menu, position the cursor on any option of interest and press Enter. A view providing the information you requested will be displayed.

If you hyperlink from the Oldest/Newest Msg Ages field, you will get the ISQINAR view for transaction queue types or the ISQOUTR view for LTERM queue types. ISQINAR and ISQOUTR provide a date and timestamp for the oldest and newest messages on the queue.

If you are viewing information for a queue owned by a single IMS and you hyperlink from the Queues Owned by this IMS field, you will access the ISQOWNER view, which provides information about messages that must be processed by a particular IMS in a shared queues group.

Part 5. Managing IPSM

This section describes system administration and operations views used to define an IMS workload and set and control the sampling of a target system. IPSM collects target system sampling for the components of response time (CORT) and workflow views. It provides information about controlling the collection of shared message queue data, securing resources, and accessing IMS product lists.

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Chapter 20. Managing an IMSplex

An IMSplex is a group of IMS address spaces that can share databases, message queues, and other resources. An IMSplex runs in an OS/390 Sysplex environment and uses an IMS Common Service Layer (CSL).

This chapter describes the IMSplex management views, which you can use to

- analyze IMSplex group members and their status (IPXSUMR view)
- analyze IMSplex connection and utilization information for a specific IMS system (IMSSPLXR view)

The following IMSplex views are provided:

View name	Description
IPXSUMR	IMSplex Member Status view
IMSSPLXR	IMSplex Information view

Accessing the IMSplex Views

You can display the IMSplex views by entering the view name on the command line, or by entering VIEWS and then selecting from the list of views.

You can also hyperlink to the IMSplex views from the IMS Easy Menu (EZIMS), the IMS Sysplex Easy Menu (EZISSI), the IMS Fast Menu (EZIFAST), or the IMS Menu (IMSMPR).

IMSplex Member Status View

This section describes the IMSplex Member Status view (IPXSUMR), which is shown in Figures 263 and 264.

The IPXSUMR view is a realtime or past interval tabular view that shows the structure and status of IMSplex group members, including both IMS control region members and SCI component members.

The IPXSUMR view 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 MVIMS PAS ID, version number, and PUT level.

To display the IMSplex Member Status view, enter IPXSUMR on any command line in IPSM. You can hyperlink to IPXSUMR from the IMSplex option in the EZISSI and IMSMPR menus and from the IMSplex Name option in the IMS Activity views (IMSDTL*) and the IMS Sysplex Activity views (IMSPLX*).

```
22MAR2004  12:20:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
>W1 =IPXSUMR==========IMSxxx===*========22MAR2004==12:20:36====MVIMS====D====2
 IMSplex  Member                                  Job                  OS
 Name     Name     Status       Type    Subtype  Name         Version  Name
 CSLPLX81 I8ASCQS  ACTIVE       CQS              I8ACQS       1.3.0    SJSC
 CSLPLX81 I8CSLOM  ACTIVE,READY OM               I8CSLOM      1.1.0    SJSC
 CSLPLX81 I8CSLRM  ACTIVE,READY RM      MULTRM   I8CSLRM      1.1.0    SJSC
 CSLPLX81 I8CSLSC  ACTIVE,READY SCI              I8CSLCSI     1.1.0    SJSC
 CSLPLX81 I8A      ACTIVE,READY IMS     DBDC     I8A331CT     8.1.0    SJSC
 CSLPLX81 X81H     ACTIVE,READY IMS     DBDC     IMS81X       8.1.0    SJSC
 CSLPLX81 I8BSCQS  ACTIVE       CQS              I8BCQS       1.3.0    SJSD
 CSLPLX81 I8DSLSC  ACTIVE,READY SCI              I8DSLCSI     1.1.0    SJSD
 CSLPLX81 I8B      ACTIVE,READY IMS     DBDC     I8B331CT     8.1.0    SJSD
```

Figure 263. IMSplex Member Status View (IPXSUMR)

```
22MAR2004  12:20:36 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
<W1 =IPXSUMR==========IMSxxx===*========22MAR2004==12:20:36====MVIMS====D====2
 IMSplex  OS       MVIMS    MVIMS    MVIMS
 Name     Name     PAS      Version  PUT Level
 CSLPLX81 SJSC     ----     ------   -----
 CSLPLX81 SJSC     ----     ------   -----
 CSLPLX81 SJSC     ----     ------   -----
 CSLPLX81 SJSC     ----     ------   -----
 CSLPLX81 SJSC     ----     ------   -----
 CSLPLX81 SJSC     GG33     3.3.20   0202A
 CSLPLX81 SJSD     ----     ------   -----
 CSLPLX81 SJSD     ----     ------   -----
 CSLPLX81 SJSD     ----     ------   -----
```

Figure 264. IMSplex Member Status View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPXSUMR view.

Hyperlink from	To see
Member Name (of an IMS control region member)	IMSSPLXR view, which provides connectivity and utilization information about the selected IMS system

IMSplex Information View

This section describes the IMSplex Information view (IMSSPLXR), which is shown in Figure 265.

The IMSSPLXR view is a realtime or past interval detail view that shows information about the IMSplex connectivity and utilization of a specific IMS system.

The 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

To display the IMSplex Information view, enter IMSSPLXR on any command line in IPSM. You can also hyperlink from the IMSplex Connection option in the EZIMS and EZIFAST menus.

```
22MAR2004  13:55:01 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =IMSSPLXR=========IMSxxx===*======22MAR2004==13:55:01====MVIMS====D====2
 IMS Name................         IMS81X    Msg Share Group..     DFSXCFGP
 IMSID...................           X81H    DB Share Group...     IMSNWAY
 IMSplex Name............       CSLPLX81

 -IMSplex----------------                   -Options---------
 SCI Jobname.............       I8CSLCSI    Command Security. RACF/EXT
 SCI Version.............          1.1.0    LEOPT............        N
 Registered to SCI.......              Y
 Registered to OM........              Y    -Online Change---
 Registered to RM........              Y    Scope............    LOCAL
 Using Resource Structure              N    Global OLC Active        N
                                            Check ACBLIB.....        N
                                            Check FORMAT.....        N
                                            Check MODBLKS....        N
```

Figure 265. IMSplex Information View (IMSSPLXR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IMSSPLXR view.

Hyperlink from	To see
IMS Name	IMSMPR menu, where you can access additional information about the selected IMS system
IMSplex Name	IPXSUMR view, which shows IMSplex group members and their status

Chapter 21. Setting Target Samplers

A sampler makes periodic observations of the state of one or more target IMS systems. These observations are accumulated and displayed as performance information in the workflow and components of response time (CORT) views. The rate of sampling and the types of information collected can be controlled by using sampler definition parameters. Administrative views let you add or change sampler definitions for targets.

Sampler parameter definitions are shown by the ISAMP and ISAMPD system administration views.

ISAMP – Sampler Administration

```
22MAR2004  08:47:09 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISAMP=============IMSxxx===*========(00 BROWSE        )====MVIMS====D====2
CMD Target   Status   UpdSyste UpdUser  UpdTime  UpdDate   Description
--- -------- -------- -------- -------- -------- --------- ------------
    IMSxxx   Install  SYSD     BOLDSK3  14:38    22MAR2004 IMS 6.1 'X' testing
    IMSxxx   Install  SYSD     BOLDSK3  06:49    22MAR2004 Production IMS
```

Figure 266. ISAMP View

You can select the ISAMP view at any time by entering one of the following view names on the command line:

- COMMAND ===> ISAMP
- COMMAND ===> ADMIN

  ADMIN groups views by system and operations administration functions and is available from the MAIN menu when IPSM starts. Select ISAMP from the list of ADMIN views.
- COMMAND ===> VIEWS

  Select ISAMP from the list of views.

To add a new target sampler definition or change an existing one, you must first enter the following on the command line:

COMMAND ===> EDIT

The window information line changes from BROWSE to EDIT. In edit mode, you can use

- Primary commands to
  - **ADD** a new definition
  - **CANCEL** any changes made

    This discards any changes made to the definition since the last save.
  - **SAVE** a definition you have added or changed
  - **END** your edit session

    This saves any changes you made and redisplays the previous view.
- Line commands to select an existing definition to
  - **ADD** a definition using one you selected as a model
  - **CHAnge** the selected definition
  - **DELete** the selected definition
  - **UNDelete** or recover the selected definition if it is not saved
  - **INStall** or activate the selected definition

Online help describes how to use these commands. Select the view name with the cursor, press your help key, and then select Actions from the help window.

ISAMPD – Sampler Administration Detail

```
22MAR2004  09:24:50 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                 SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =ISAMPD============IMSxxx===*========(00 BROWSE        )====MVIMS====D====1
 Target..... IMSxxx                    Time1  Time2  Time3  Time4  Time5
 Status..... Install   Start Time..... 09:21  09:22  09:24  09:25  09:29
 Update Info           End Time....... 09:22  09:23  09:25  09:29  24:00
  System.... SYSD      ---Samplers----
  User...... BOLDSK3   Workflow data.. N      Y      Y      Y      Y
  Time...... 09:13     CORT data...... Y      Y      Y      Y      Y
  Date...... 22MAR2004  Sample Rate... 1      2      3      4      5
 Deleted.... N          Extended I/O.. N      Y      Y      Y      Y
                        Extended Latch N      N      Y      Y      Y
                        Extended Lock. N      N      N      Y      Y
                        Workload...... N      N      N      Y      N
```

Figure 267. ISAMPD View

ISAMPD shows detailed information about the status and parameters in effect for a target selected from the ISAMP view. It shows the current values of the parameters. The values shown may not be in effect if the parameters have 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.

- Changed sampler parameters 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 use the ADD primary command from this view to add parameters for another target using this definition as a model. To add a new target sampler definition, you must first enter the following on the command line:

COMMAND ===> EDIT

The window information line changes from BROWSE to EDIT.

Online help describes how to use these commands. Select the view name with the cursor, press your help key, and then select Actions from the help window.

Controlling Sampler Defaults

If you do not define a sampling for a target, default sampler parameters are used. These parameters specify a sampling period of 24 hours a day at 2 times a second to collect all information for workflow and CORT views. You can change this by adding a sampler definition named DEFAULT. When this definition exists, the parameters specified for it are used instead of the distributed sampler defaults.

To create the sampler DEFAULT target definition, you ADD the definition from the ISAMP or ISAMPD view as follows:

1. COMMAND ===> ISAMP
2. ADD a definition for a target and name it DEFAULT

   You can use either the primary command as shown below or the ADD line command if you want to use previously defined target sampler parameters as a model. Enter the following:

   a. COMMAND ===> EDIT

      You must be in an EDIT session before you can use either a primary or line command.

   b. COMMAND ===> ADD

      The ADD command displays the following ISAMP dialog box.

```
22MAR2004  09:24:50 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =ISAMP=============IMSxxx===*========(00 EDIT          )====MVIMS====D====4
.-----------------------------------------------------------------------------.
| ---------------------- ADD PLEXUS SAMPLER DEFINITION ---------------------- |
| COMMAND ===>                                                                |
|                                                                             |
| Target      ===> DEFAULT                                                    |
| Description ===> SITE SAMPLER DEFAULTS                                      |
|                                                                             |
|   Start End    WFlow CORT Samp ---Extended----                              |
|   Time  Time   Data  Data Rate I/O  Latch Lock  Wkld                        |
| 1 00:00 24:00  YES   YES   2   YES   YES   YES   YES                        |
| 2                                                                           |
| 3                                                                           |
| 4                                                                           |
| 5                                                                           |
|   hh:mm hh:mm  -YES/NO--  1-5  -------YES/NO--------                        |
|                                                                             |
| Press End to add the definition. Enter CANCEL to leave without adding.      |
|                                                                             |
|                                                                             |
'-----------------------------------------------------------------------------'
```

Figure 268. ISAMP View Dialog Box

Specify a target name of DEFAULT as shown above and change the parameters to those that you want to use as the defaults for all targets. That allows you to change the sampler defaults for all your targets at once and create unique sampler definitions for specific targets. To do this, the BBPARM data set must be shared by all PASs.

Chapter 22. Controlling Samplers

The state of target IMSs is sampled periodically 24 hours a day, 2 times a second by default or as defined by a sets (or sets) of user-specified sampler parameters, as described in Chapter 21, “Setting Target Samplers” on page 329. The samplings are accumulated and used by the workflow and components of response time (CORT) views.

Using operations views, you can

- See if a target is being sampled
- Control the current state of a sampling with stop, start, or quiesce commands

These views are ISAMPOP and ISAMPOPD.

ISAMPOP – Sampler Operations Administration

```
22MAR2004  15:30:48 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =ISAMPOP===========IMSxxx===*========22MAR2004==15:30:48====MVIMS====D====4
CMD Target   Sampler  Target   Time     Description
--- -------- Status   Status   Status   ----------------------
    IMSxxx   Quiesced Inactive Notset
    IMSxxx   Quiesced Inactive Notset
    IMSxxx   Quiesced Inactive Notset
    IMSxxx   Active   Active   SetTime1 IPSM IMS 6.1 SYSTEM
```

Figure 269. ISAMPOP View

You can select the ISAMPOP view at any time by typing one of the following commands on the command line:

- COMMAND ===> ISAMPOP
- COMMAND ===> ADMIN

  ADMIN groups views by system and operations administration functions and is available from the MAIN menu when IPSM starts. Select ISAMPOP from the list of ADMIN views.
- COMMAND ===> VIEWS

  Select ISAMPOP from the list of views.

From this view, you can use the following line commands to control target sampling:

STArt	Start sampling the selected IMS target
STOp	Stop sampling the selected IMS target
Quiesce	Put the target sampling in a latent state

Online help describes how to use these commands. Select the view name, press your help key, and then select Actions from the help window.

ISAMPOPD – Sampler Operations Administration Detail

```
22MAR2004  09:29:25 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
 W1 =ISAMPOPD==========IMSxxx===*========22MAR2004==09:29:25====MVIMS====D====1
 Target..... IMSxxx                  Time1  Time2  Time3  Time4  Time5
 Smp Status. Quiesced Start Time..... 00:00  08:00  17:30
 Tgt Status. Inactive End Time....... 08:00  17:30  24:00
 Time Status Notset   ---Samplers----
                      Workflow data.. Y      Y      Y
                      CORT data...... Y      Y      Y
                       Sample Rate... 2      2      2
                       Extended I/O.. N      Y      Y
                       Extended Latch N      N      Y
                       Extended Lock. N      N      Y
                       Workload...... Y      Y      Y
```

Figure 270. ISAMPOPD 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 will be collected for that target.

Chapter 23. Controlling Shared Message Queue Data Collection

Several of the workflow, CQS information, and terminal and user views can display shared queue statistics for IMS systems that use shared message queues.

The ISQQUERY parameter in BBPARM member IMFBEX00 is used to control how frequently CQS is queried to refresh the IPSM shared queues data tables. You can use the parameter to control the amount of resources used to collect shared message queues data. Views that use the shared queues data tables will display static values in fields that display message count and message age data until expiration of the refresh period defined with the ISQQUERY parameter.

The following is a representation of the ISQQUERY format:

```
ISQQUERY=(x,y,z)
```

- The *x* value controls the refresh rate of message age data in the CQS information views (the ISQ* views)
- The *y* value controls the refresh rate of message count data for shared message queues in non-workflow views
- The *z* value controls the refresh rate of message count fields for shared message queues in workflow views

CQS Information Views with Message Age Fields

The *x* value applies to CQS information views (ISQ*) that show message age data. The *x* value is used

- to specify whether or not message age data will be collected and displayed for shared message queues
- to define the refresh rate (in seconds) for the data in message age fields if such data is collected

If a refresh rate is specified for the message data, no matter how frequently a CQS view is refreshed, message ages reported in the view will not be refreshed until the specified refresh period expires.

The *x* value can be 0 or from 60 through 7200. The default is 60.

A value of zero in the *x* position prevents the collection of message age data for display in the CQS views. When the age data is not being collected, the letters SMQ are displayed in message age fields, rather than message age data.

Note: Because frequent refreshing of message age data can consume a significant amount of processing time and can delay IMS and other CQS activity, if you allow collection of the data, you should try to set the *x* value reasonably high. If you are concerned only with messages older than an hour, for example, you should consider setting the value at high as 3600.

Non-Workflow Views with Message Count Fields

The *y* value applies to non-workflow views that show message count data, such as the CQS information (ISQ*), transaction (ITR*), and user/terminal information (IU*) views. The data in these views is collected on demand in real time. The *y* value is used to

- specify whether or not message count data will be collected and displayed for shared message queues
- define the refresh rate (in seconds) for the data in message count fields if such data is collected

If a refresh rate is specified for the message data, no matter how frequently a view is refreshed, message counts reported in the view will not be refreshed until the specified refresh period expires.

The *y* value can be zero, 5, 10 or 15. The default is 5.

A value of zero in the *y* position prevents the collection of message count data for display in non-workflow views. When the message count data is not being collected, the letters SMQ are displayed in message count fields, rather than message count data.

Workflow Views with Message Count Fields

The *z* value applies only to workload views. The data for workload views is collected continuously by the workflow sampler, which provides realtime and historical data.
The *z* value is used to

- specify whether or not message count data will be collected and displayed for shared message queues
- define the refresh rate (in seconds) for the data in message count fields if such data is collected

If a refresh rate is specified for the message data, no matter how frequently a view is refreshed, message counts reported in the view will not be refreshed until the specified refresh period expires.

The *z* value can be 0 or 5. The default is 5.

A value of zero in the *z* position prevents the collection of message count data for display in workflow views. When the message count data is not being collected, the letters SMQ are displayed in message count fields, rather than message count data.

Chapter 24. Viewing a List of BMC Software IMS Products

This chapter explains how to use the IMS product views to display a list of BMC Software performance products that are active in each IMS control region associated with an MVIMS PAS.

The IMS product views

- Provide a list of BMC Software IMS-related products that are active in the same IMS control region as the MVIMS target
- Include online help that describes the products and what each can provide.
- Provide the product release and maintenance level
- Indicate product status

The following IMS product views are provided:

View name	Description
IPRDSUM	BMC Software Products Summary
IPRDDTL	BMC Software Products Detail

Accessing the Product Views

You can access the IMS product views by selecting the Installed Products option in the

- IMS Easy Menus (EZIMS and EZIMSR)
- IMS Fast Menus (EZIFAST and EZIFASTR)
- IMS SSI Menus (EZISSI and EZISSIR)

If you select the Installed Products option on EZIMS, EZIMSR, EZIFAST, or EZIFASTR, you access the IPRDDTL view. If you select the option on EZISSI or EZISSIR, you access the IPRDSUM view.

You can also display the IMS product views by

- Entering the view name on a command line
- Entering VIEWS on the command line and selecting the view from the list of views
- Entering MAIN on the command line, selecting IMSPRODS, and selecting either of the two product views from the IMSPRODS view list

BMC Software Products Summary View

The BMC Software Products Summary view (IPRDSUM) displays a summary of the BMC Software IMS products 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 view displays one row for each installed product, and the Count field shows how many IMS systems have the associated product installed. For each type of product, IPRDSUM shows

- Status of the product
- The product's version, release, and maintenance level
- The product's IMS and OS/390 systems

```
22MAR2004  12:11:22 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPRDSUM===========IMSxxx===*========22MAR2004==06:43:47====MVIMS====D====4
 Product                            Product      Product      IMS      MVS
 Name                         Count Status       Level        Name     Name
 AutoOPERATOR for IMS             1 ACTIVE       V6.1.00      IMSxxx   SJSD
 MAINVIEW for IMS                 1 ACTIVE       V3.3.00      IMSxxx   SJSD
 Q:MANAGER IMS                    1 ACTIVE       V2.3.01      IMSxxx   SJSD
 Q:MANAGER IMS EP                 1 ACTIVE       V2.3.01      IMSxxx   SJSD
```

Figure 271. BMC Software Products Summary View (IPRDSUM)

The help for the Product Name field provides brief product descriptions. For information about the fields in the view, position the cursor on any field and press your help key.

The following hyperlink is provided in the IPRDDTL view.

Hyperlink from	To see
Count	IPRDDTL view, which shows information about each IMS product installation

BMC Software Products Detail View

The BMC Software Products Detail view (IPRDDTL) displays a list of the BMC Software IMS products that are installed in the IMS control regions in the context set by the user.

The view displays one row for each IMS a product is installed on, and for each product installation it shows

- Status of the product
- The product's version, release, and maintenance level
- The product's IMS and OS/390 systems

If you access this view by hyperlinking from IPRDSUM, the view displays only information about the product you selected on IPRDSUM. If you access the view by its name, it displays information about all installations of BMC Software IMS products.

```
22MAR2004  12:11:22 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===>
 W1 =IPRDDTL===========IMSxxx===*========22MAR2004==06:42:36====MVIMS====D====4
 Product                      Product      Product      IMS      MVS
 Name                         Status       Level        Name     Name
 AutoOPERATOR for IMS         ACTIVE       V6.1.00      IMSxxx   SJSD
 MAINVIEW for IMS             ACTIVE       V3.3.00      IMSxxx   SJSD
 Q:MANAGER IMS                ACTIVE       V2.3.02      IMSxxx   SJSD
 Q:MANAGER IMS EP             ACTIVE       V2.3.02      IMSxxx   SJSD
```

Figure 272. BMC Software Products Detail View (IPRDDTL)

The help for the Product Name field provides brief product descriptions. For information about the fields in the view, position the cursor on any field and press your help key.

Chapter 25. Securing IPSM Resources

External security managers (ESM), such as CA-ACF2, CA-TOP SECRET, or RACF can be used to protect access to a component and its resources, such as views, view actions or commands, and data. Component resources are identified to your ESM as a resource entity that can be protected so that existing security rules, permits, or profiles can be used.

Using the security resource administration views, you can see the access authorizations that are enabled for the IPSM resources by default. These views are SERDEF and SERDEFE. You can use them to enable, disable, and change security resource definitions. For information about securing resources, see *Implementing Security for MAINVIEW Products.*

SERDEF – Security Resource Definitions

```
22MAR2004  14:29:16 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS-------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =SERDEF============IMSxxx===*========22MAR2004==14:29:05====MVIMS====D====5
CMD Description                              Enab Change Comment
--- ------------                             ---- --------------
    Workload Definitions - Alter Data Set    No
    Appl Workload- Table Data                Yes
    Balancing Group - Table Data             Yes
    Class Activity - Table Data              Yes
    IMS Overview - Table Data                Yes
```

Figure 273. SERDEF View

You can select the SERDEF view at any time by typing one of the following commands on the command line:

- COMMAND ===> SERDEF
- COMMAND ===> VIEWS

  Select SERDEF from the list of views displayed.
- COMMAND ===> ADMIN

  Select SERDEF from the list of views displayed in ADMIN. (ADMIN groups views by system and operations administration functions and is available from the MAIN menu when IPSM starts.)

You can use the SERDEF view to disable or enable resource definitions, or to select a single resource definition to view and change its attributes.

To see online help for SERDEF view or any of its fields, position the cursor on the view name on the window information line, or on any field in the view, and then press your help key. See the *Implementing Security for MAINVIEW Products* manual for a detailed description of how to use this view.

```
22MAR2004  14:30:29 ------ MAINVIEW WINDOW INTERFACE(Rx.x.xx)MVIMS------------
COMMAND  ===>                                                SCROLL ===> CSR
CURR WIN ===> 1        ALT WIN ===>
>W1 =SERDEF===SERDEFE==IMSxxx===*========22MAR2004==14:29:05====MVIMS====D====1
    Res Key.... BBF9PA40PURG Desc..... Transaction - Action - Purge
     Enabled... Yes          Comment.. *Unchanged*
                             Type..... ACTION
    ESM Info---
     Class..... $BBM         Entity... BBM.&PRODUCT.&CONTEXT.&INTTABLE.&INTACTI
     VolSer.... *NONE*       Intent... READ
     LogAuth... Allow        LogFail.. Allow
    Substituion Values
     IntTable.. FPA40        ExtTable. Tran
     IntAction. PURGE        ExtAction PURGE
     IntActTab. BBFTPA40     Product.. MVIMS
     Parms?.... No           Fields?.. Yes
    Update Info              Mem Suff. 00
     UpdSystem. *NONE*       UpdTime.. 14:29:08
     UpdUser... *NONE*       UpdDate.. &windate.
    Res Version
     Version... 1            Release.. 1
                             ModLevel. 0
```

Figure 274. SERDEFE View

SERDEFE shows detailed information about a resource definition selected from the SERDEF view. It shows the class and entity names and other attributes for that definition. To change a definition's attributes, you can use the commands described in online action help or in the *Implementing Security for MAINVIEW Products* manual.

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