

**MAINVIEW®**  
**for UNIX System Services**  
**Getting Started**

**Version 1.2**

**March 15, 2002**



Copyright © 1999-2002 BMC Software, Inc., as an unpublished work. All rights reserved.

BMC Software, the BMC Software logos, and all other BMC Software product or service names are registered trademarks or trademarks of BMC Software, Inc. IBM and DB2 are registered trademarks of International Business Machines Corp. All other registered trademarks or trademarks belong to their respective companies.

THE USE AND CONTENTS OF THIS DOCUMENTATION ARE GOVERNED BY THE SOFTWARE LICENSE AGREEMENT ENCLOSED AT THE BACK OF THIS DOCUMENTATION.

## Restricted Rights Legend

U.S. GOVERNMENT RESTRICTED RIGHTS. UNPUBLISHED—RIGHTS RESERVED UNDER THE COPYRIGHT LAWS OF THE UNITED STATES. Use, duplication, or disclosure by the U.S. Government is subject to restrictions set forth in FAR Section 52.227-14 Alt. III (g)(3), FAR Section 52.227-19, DFARS 252.227-7014 (b), or DFARS 227.7202, as amended from time to time. Send any contract notices to Contractor/Manufacturer:

**BMC Software, Inc.**  
2101 CityWest Blvd.  
Houston TX 77042-2827  
USA

---

## Contacting BMC Software

You can access the BMC Software Web site at <http://www.bmc.com>. From this Web site, you can obtain general information about the company, its products, special events, and career opportunities. For a complete list of all BMC Software offices and locations, go to <http://www.bmc.com/corporate/offices.html>.

### USA and Canada

**Address** BMC Software, Inc.  
2101 CityWest Blvd.  
Houston TX 77042-2827

**Telephone** 713 918 8800 or  
800 841 2031

**Fax** 713 918 8000

### Outside USA and Canada

**Telephone** (01) 713 918 8800

**Fax** (01) 713 918 8000

---

---

## Customer Support

You can obtain technical support by using the Support page on the BMC Software Web site or by contacting Customer Support by telephone or e-mail. To expedite your inquiry, please see “Before Contacting BMC Software,” below.

### Support Web Site

You can obtain technical support from BMC Software 24 hours a day, seven days a week by accessing the technical support Web site at <http://www.bmc.com/support.html>. From this site, you can

- read overviews about support services and programs that BMC Software offers
- find the most current information about BMC Software products
- search a database for problems similar to yours and possible solutions
- order or download product documentation
- report a problem or ask a question
- subscribe to receive e-mail notices when new product versions are released
- find worldwide BMC Software support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

### Support via Telephone or E-mail

In the USA and Canada, if you need technical support and do not have access to the Web, call 800 537 1813. Outside the USA and Canada, please contact your local support center for assistance. To find telephone and e-mail contact information for the BMC Software support center that services your location, refer to the Contact Customer Support section of the Support page on the BMC Software Web site at [www.bmc.com/support.html](http://www.bmc.com/support.html).

### Before Contacting BMC Software

Before you contact BMC Software, have the following information available so that a technical support analyst 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 program temporary fix (PTF)
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or PTF
- 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

---

---

---

# Contents

<b>About This Book</b> .....	<b>ix</b>
<b>Chapter 1</b>	<b>Getting Started</b>
	MAINVIEW Window Interface ..... 1-3
	Easy Menus..... 1-4
<b>Chapter 2</b>	<b>Logging On to MAINVIEW for UNIX System Services</b>
	Logging On Instructions..... 2-2
	ISPF Session Control Parameters Panel ..... 2-3
	MAINVIEW for UNIX System Services Easy Menu ..... 2-4
	Panel Definition Created by Your Product Administrator ..... 2-4
<b>Chapter 3</b>	<b>Using MAINVIEW for UNIX System Services Views</b>
	Understanding MAINVIEW for UNIX System Services..... 3-2
	Reading the Window Information Line ..... 3-3
	Performing Basic View Functions ..... 3-4
	Using the Process Views..... 3-7
	Examining the File System Views ..... 3-10
	Using System Views..... 3-13
	Dynamically Changing Parameter Setting ..... 3-15
	Using User Views ..... 3-16
<b>Chapter 4</b>	<b>Displaying Historical Data</b>
	Determining Data Availability ..... 4-2
	Using the TIME Command..... 4-3
	Displaying Data from Multiple Intervals ..... 4-7
	Moving Quickly between Intervals..... 4-12
	Understanding the Time and Duration Fields..... 4-14
	Determining When Data Was Collected..... 4-15
<b>Chapter 5</b>	<b>Customizing Views</b>
	Creating a Partitioned Data Set..... 5-2
	Creating Your Own View ..... 5-3
	Setting Hyperlinks ..... 5-9

---

	Including Excluded Fields . . . . .	5-12
	Renaming Fields . . . . .	5-15
	Moving Fields . . . . .	5-17
	Setting Thresholds . . . . .	5-18
	Deleting a Customized View . . . . .	5-23
	Performing Other Customization Tasks . . . . .	5-24
<b>Chapter 6</b>	<b>Summarized Views</b>	
	Creating a Summary View . . . . .	6-2
	Formatting Summarized Data . . . . .	6-4
	Saving Formatted Data . . . . .	6-7
	Expanding a Summary View . . . . .	6-8
<b>Chapter 7</b>	<b>Redisplaying Data without Updating</b>	
	Understanding Queries and Forms . . . . .	7-2
	Using Commands . . . . .	7-3
<b>Chapter 8</b>	<b>Filtering Data</b>	
	Using the WHERE Command . . . . .	8-2
<b>Glossary</b>		
<b>Index</b>		

---

---

# Figures

Figure 2-1	MAINVIEW Selection Menu Panel	2-2
Figure 2-2	OS/390, z/OS, and USS Solutions Panel	2-3
Figure 2-3	Session Control Parameters Panel	2-3
Figure 2-4	EZUSS Menu	2-4
Figure 3-1	Displaying Processes from the EZUSS Menu	3-4
Figure 3-2	EZUPRCS Menu	3-5
Figure 3-3	PSOVERZ View	3-5
Figure 3-4	Looking at Process Activity using the PSOVERZ View	3-8
Figure 3-5	PSDELAYZ View	3-9
Figure 3-6	FSMOUNTZ View	3-10
Figure 3-7	FSMOUNTZ View (Scrolled to the Right)	3-10
Figure 3-8	FSPACE View	3-11
Figure 3-9	REQSTAT View	3-12
Figure 3-10	BPXPRM View	3-13
Figure 3-11	IPCBXP View	3-14
Figure 3-12	Change UNIX Configuration Settings	3-15
Figure 3-13	USROVERZ View	3-16
Figure 3-14	USRSESSZ View	3-17
Figure 4-1	DSLISIT	4-2
Figure 4-2	Set Time Frame Dialog Box	4-3
Figure 4-3	FSMOUNTZ with an Open Window	4-4
Figure 4-4	Set Time Frame Dialog Box	4-5
Figure 4-5	FSMOUNTZ in Two Time Periods	4-6
Figure 4-6	PSUSE with a Duration of One Interval	4-9
Figure 4-7	Changing the Date in the Set Time Frame Dialog Box	4-10
Figure 4-8	Using TIME PREV to Cycle through Intervals	4-13
Figure 4-9	PSOVER View with Time, Date, and Hr Fields Included	4-16
Figure 5-1	Using the PSOVERZ View to Create Your Own View	5-3
Figure 5-2	VIEW CUSTOMIZATION Facility	5-4
Figure 5-3	Creating Your Own View	5-5
Figure 5-4	Exit View Customization Panel	5-6
Figure 5-5	Save View Definition Panel	5-6
Figure 5-6	Views Starting with R	5-7
Figure 5-7	RSOVERZ View	5-8

---

Figure 5-8	Using the PSOVERZ View to Create a Hyperlink . . . . .	5-9
Figure 5-9	VIEW CUSTOMIZATION - PSOVERZ . . . . .	5-10
Figure 5-10	Creating a Hyperlink . . . . .	5-11
Figure 5-11	PSUSEZ View . . . . .	5-12
Figure 5-12	PSUSEZ View Displaying Excluded Fields . . . . .	5-13
Figure 5-13	Including the Status Field . . . . .	5-14
Figure 5-14	Renaming Fields . . . . .	5-15
Figure 5-15	Displaying a Field with a New Name . . . . .	5-16
Figure 5-16	Moving a Field . . . . .	5-17
Figure 5-17	Setting Thresholds . . . . .	5-19
Figure 5-18	Completing the Threshold Fields . . . . .	5-20
Figure 5-19	Adding Three Thresholds Simultaneously . . . . .	5-22
Figure 5-20	Threshold Location . . . . .	5-23
Figure 6-1	VIEW CUSTOMIZATION for PSOVER . . . . .	6-2
Figure 6-2	Selecting the Summarize Option . . . . .	6-3
Figure 6-3	Summarizing PSOVER . . . . .	6-3
Figure 6-4	Formatting PSOVERZ Data . . . . .	6-4
Figure 6-5	Formatting a Field . . . . .	6-5
Figure 6-6	Displaying an Expanded Field . . . . .	6-6
Figure 6-7	Expanding Process Information . . . . .	6-8
Figure 6-8	Expanding Process Information . . . . .	6-9
Figure 7-1	PSOVER View . . . . .	7-2
Figure 7-2	PSDELAY View . . . . .	7-3
Figure 8-1	Filtering PSOVER . . . . .	8-2
Figure 8-2	Determining the Element Name . . . . .	8-3
Figure 8-3	SET WHERE FILTER Panel . . . . .	8-4
Figure 8-4	Inserting Filter Criteria . . . . .	8-5
Figure 8-5	PSOVER View with Filtered Data . . . . .	8-5

---

---

# About This Book

This book contains detailed information about MAINVIEW for UNIX System Services and is intended for systems analysts, systems programmers, computer operators, or anyone responsible for applying system maintenance and ensuring maximum system performance.

To use this book, you should be familiar with

- Multiple Virtual Storage (MVS) systems
- job control language (JCL)
- Interactive System Productivity Facility (ISPF)

For example, you should know how to respond to ISPF panels.

## How This Book Is Organized

This book is organized as follows. In addition, a glossary of terms and an index appear at the end of the book.

Chapter Number and Title	Description
Chapter 1, "Getting Started"	describes the MAINVIEW window interface and the MAINVIEW for UNIX System Services easy menus
Chapter 2, "Logging On to MAINVIEW for UNIX System Services"	describes how to log on to MAINVIEW for UNIX System Services
Chapter 3, "Using MAINVIEW for UNIX System Services Views"	describes how to perform basic view functions, how to examine views, and how to solve problems using MAINVIEW for UNIX System Services views
Chapter 4, "Displaying Historical Data"	describes how to use historical data to look at the system as it existed during previous intervals

Chapter Number and Title	Description
Chapter 5, "Customizing Views"	describes how to use view customization to create your own views and change the appearance and content of MAINVIEW for UNIX System Services views
Chapter 6, "Summarized Views"	describes ways to use a summary view
Chapter 7, "Redisplaying Data without Updating"	describes how to use MAINVIEW for UNIX System Services to debug a problem without updating the data
Chapter 8, "Filtering Data"	describes how to use the WHERE command for a more complex filtering process

## Related Documentation

BMC Software products are supported by several types of documentation:

- online and printed books
- online Help
- release notes and other notices

**Note:** The messages that MAINVIEW for UNIX System Services generates are available online by typing **msg** followed by the message number on any MAINVIEW screen.

## Online and Printed Books

The books that accompany BMC Software products are available in online format and printed format. If you are a Windows or Unix user, you can view online books with Acrobat Reader from Adobe Systems. The reader is provided at no cost, as explained in "To Access Online Books." You can also obtain additional printed books from BMC Software, as explained in "To Request Additional Printed Books."

### To Access Online Books

Online books are formatted as Portable Document Format (PDF) files. You can view them, print them, or copy them to your computer by using Acrobat Reader 3.0 or later. You can access online books from the documentation compact disc (CD) that accompanies your product or from the World Wide Web.

---

In some cases, installation of Acrobat Reader and downloading the online books is an optional part of the product-installation process. For information about downloading the free reader from the Web, go to the Adobe Systems site at <http://www.adobe.com>.

To view any online book that BMC Software offers, visit the support page of the BMC Software Web site at <http://www.bmc.com/support.html>. Select a product to access the related documentation.

### **To Request Additional Printed Books**

BMC Software provides printed books with your product order. To request additional books, go to <http://www.bmc.com/support.html>.

## **Online Help**

The MAINVIEW for UNIX System Services product includes online Help. In the MAINVIEW for UNIX System Services ISPF interface, you can access Help by pressing **PF1** from any ISPF panel.

## **Release Notes and Other Notices**

Printed release notes accompany each BMC Software product. Release notes provide current information such as

- updates to the installation instructions
- last-minute product information

In addition, BMC Software sometimes provides updated product information between releases (in the form of a flash or a technical bulletin, for example), and maintenance announcements accompany maintenance releases. The latest versions of the release notes and other notices are available on the Web at [www.bmc.com/support.html](http://www.bmc.com/support.html).

---

# Conventions

This book uses the following general conventions:

Item	Format	Example
information that you are instructed to type	bolded and in Times 10 pt. font	Type <b>SEARCH DB</b> in the designated field.
specific (standard) keyboard key names	bolded and in Times 10 pt. font	Press <b>Enter</b> .
field names, text on a panel	bolded and in Times 10 pt. font	Type the appropriate entry in the <b>Command</b> field.
directories, file names, Web addresses	bolded and in Times 10 pt. font	The BMC Software home page is at <b>www.bmc.com</b> .
nonspecific key names, option names	every letter capitalized	Use the HELP function key.  KEEPDICTIONARY option
MVS calls, commands, control statements, keywords, parameters, reserved words	every letter capitalized	Use the SEARCH command to find a particular object.  The product generates the SQL TABLE statement next.
code examples, syntax statements, system messages, screen text	Courier font	//STEPLIB DD  The table <table_name> is not available.
emphasized words, new terms, variables	italics	The instructions that you give to the software are called <i>commands</i> .  In this message, the variable <i>file_name</i> represents the file that caused the error.
single-step procedures	preceded by the >> symbol	>> To enable incremental backups, type y and press <b>Enter</b> at the next prompt.

This book uses the following types of special text:

**Note:** Notes contain important information that you should consider.

**Warning!** Warnings alert you to situations that could cause problems, such as loss of data, if you do not follow instructions carefully.

**Tip:** Tips contain useful information that might improve product performance or that might make procedures easier to follow.

---

---

# Chapter 1 Getting Started

This chapter provides an overview of MAINVIEW for UNIX System Services, which is a system management application that helps you monitor and manage the performance of your UNIX System Services from a MAINVIEW window interface. It also includes a list of related MAINVIEW products.

This chapter includes the following topics:

MAINVIEW Window Interface . . . . .	1-3
Easy Menus. . . . .	1-4

---

MAINVIEW for UNIX System Services provides a basic set of views that you can use to monitor the following information:

- MVS address spaces that have been dubbed as MVS-OE address spaces
- processes that are running in those address spaces and details about the processes
- threads that are running for each process
- files open for a process
- summary information for mounted file systems
- detailed file information, including size, owner, and file permissions
- HFS global buffer information and file system statistics
- address space information, including usage and delays
- users logged in to UNIX System Services
- system parameters in BPXPRMxx

In addition, with MAINVIEW for UNIX System Services you can

- specify required processes so that you can determine when required processes are missing

MAINVIEW alarms can be set if any required processes are missing.

- specify that certain HFS files be mounted so that you can determine when required files are not mounted

MAINVIEW alarms can be triggered if important files are not mounted.

- improve integration and hyperlinks to other MAINVIEW products
- view system BPXPRMxx parameters and dynamically modify them
- view and change the HFS Global Buffer Limits, specifically the virtual storage maximums and fixed storage minimums
- view and dynamically change external HFS file-size allocation

# MAINVIEW Window Interface

The BMC Software MAINVIEW family of products relies on a common communications framework that operates across multiple machines in multiple locations. This framework is called the MAINVIEW window interface, a robust, easy-to-use extension of the standard ISPF interface. MAINVIEW products include

- MAINVIEW<sup>®</sup> for UNIX System Services
- CMF<sup>®</sup> MONITOR
- IMSplex System Manager
- MAINVIEW<sup>®</sup> Alarm Manager
- MAINVIEW<sup>®</sup> Alternate Access
- MAINVIEW<sup>®</sup> Explorer
- MAINVIEW<sup>®</sup> FOCAL POINT
- MAINVIEW<sup>®</sup> for CICS
- MAINVIEW<sup>®</sup> for DB2<sup>®</sup>
- MAINVIEW<sup>®</sup> for DBCTL
- MAINVIEW<sup>®</sup> for IMS
- MAINVIEW<sup>®</sup> for MQ Series (replaces Command MQ for S/390)
- MAINVIEW<sup>®</sup> for OS/390 (replaces MAINVIEW<sup>®</sup> for MVS)
- MAINVIEW<sup>®</sup> for TCP/IP
- MAINVIEW<sup>®</sup> for VTAM
- MAINVIEW<sup>®</sup> for WebSphere
- MAINVIEW<sup>®</sup> VistaPoint<sup>™</sup>
- Plex Manager (part of MAINVIEW Architecture)

With the MAINVIEW window interface, you can use multiple products to control and monitor resources on multiple systems, all on just one screen.

## Easy Menus

MAINVIEW for UNIX System Services has created a series of easy menus to offer a quick, convenient way to use the product with little introduction and without having to remember view names. The easy menus allow navigation to the various parts of MAINVIEW for UNIX System Services based on a feature you want to monitor rather than on a specific view.

EZUSS is the primary easy menu for MAINVIEW for UNIX System Services. From the selections on this menu, you can access other high-level easy menus, such as EZUPRCS and EZUSYS, to quickly locate information about activities on your system.

For more information about how to use the MAINVIEW for UNIX System Services easy menus, refer to Chapter 3, “Using MAINVIEW for UNIX System Services Views.”

---

---

# Chapter 2      Logging On to MAINVIEW for UNIX System Services

This chapter shows you how to log on to MAINVIEW for UNIX System Services. It includes the following topics:

Logging On Instructions . . . . .	2-2
ISPF Session Control Parameters Panel . . . . .	2-3
MAINVIEW for UNIX System Services Easy Menu . . . . .	2-4
Panel Definition Created by Your Product Administrator . . . . .	2-4

# Logging On Instructions

To log on to MAINVIEW for UNIX System Services, follow these instructions:

**Step 1** Display the MAINVIEW Selection Menu panel by performing one of the following steps:

- If your ISPF main panel contains an option for MAINVIEW products, select that option.
- From any ISPF panel, issue **TSO MAINVIEW**. (MAINVIEW is a CLIST that you or your product administrator created during AutoCustomization.)

The MAINVIEW Selection Menu panel is displayed, as shown in Figure 2-1.

**Figure 2-1** MAINVIEW Selection Menu Panel

```

----- MAINVIEW Selection Menu -----
OPTION  ==>>>                                DATE   -- MM/DD/YY
                                           TIME   -- HH:MM:SS
O  Parameters and Options                    USERID -- BAOSRR1
E  Alerts and Alarms                        MODE   -- ISPF 4.8
P  PLEX Management (PLEXMGR)
U  Utilities, Tools, and Messages

Solutions for
A  Automated Operations
C  CICS
D  DB2
I  IMS
L  Linux
N  Network Management
S  Storage Management
T  Application Management and Performance Tuning
W  WebSphere and MQSeries
Z  OS/390, z/OS, and USS

Enter X to Terminate

                                           Copyright BMC Software, Inc. 2001
    
```

**Step 2** Select Option **Z OS/390, z/OS, and USS**.

The OS/390, z/OS, and USS Solutions panel is displayed, as shown in Figure 2-2 on page 2-3.

**Figure 2-2 OS/390, z/OS, and USS Solutions Panel**

```

----- OS/390, z/OS, and USS Solutions -----
OPTION ===>
Performance
  1 MV390      MAINVIEW for OS/390
  2 MVUSS     MAINVIEW for Unix System Services
  3 CMF       CMF MONITOR
  4 SYSPROG   MAINVIEW SYSPROG Services

Operations
  5 CSMON     Common Storage Monitor
  6 CMFMON    CMFMON realtime analysis
  7 CMFUTIL   CMF Extractor Online Utilities
  8 ANALYZER  Generate CMF Analyzer batch reports
  E ALERTS    Alert Management

General Services
  M MESSAGES  Messages and Codes
  P PARS      Parameters and Options
  DATE -- MM/DD/YY
  TIME -- HH:MM:SS
  USERID -- BAOSRR1
  MODE -- ISPF 4.8

```

**Step 3** Sect Option 2 MVUSS.

One of the following panels is displayed:

- ISPF Session Control Parameters panel
- MAINVIEW for UNIX System Services Easy Menu
- panel definition created by your product administrator

These panels are described in the following sections.

## ISPF Session Control Parameters Panel

The ISPF Session Control Parameters panel looks like Figure 2-3.

**Figure 2-3 Session Control Parameters Panel**

```

BMC SOFTWARE ----- SESSION CONTROL PARAMETERS -----
COMMAND ===>

Subsystem ID   ===> BBCS   (Coordinating Address Space subsystem ID)

XDM mode      ===> NO    (Execute session in diagnostic mode, Yes/No)

Press ENTER to confirm use of session parameters entered above.

```

If this panel is displayed, ensure that the Subsystem ID field contains the coordinating address space (CAS) identifier, and then press **Enter**. If no default value is present, if you do not know the CAS identifier, or if the default value results in an error message, see your MAINVIEW for UNIX System Services product administrator.

When you see the message `Connecting...` in the upper right-hand corner of your screen, you are in the process of accessing MAINVIEW for UNIX System Services.

## MAINVIEW for UNIX System Services Easy Menu

Once you are logged on, the MAINVIEW for UNIX System Services Easy Menu (EZUSS) is displayed, as shown in Figure 2-4.

**Figure 2-4** EZUSS Menu

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ===>                                     SCROLL  ===> PAGE
CURR WIN  ===> 1          ALT WIN  ===>
W1 =EZUSS=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====1
                                MVUSS Easy Menu

  Activity                                     Utilities
> System                                     +-----+ > Alarm Management
> Processes                                 | Place cursor on | > MAINVIEW Environment
> Filesystems                             | menu item and  | > MVUSS Fast Menu
> Users                                   |   press ENTER  |
. USS Address Spaces                       +-----+ . Return...
. IPC Realtime Activity

  Action Views
> EZ Action Menu

```

For more information about using MAINVIEW for UNIX System Services easy menus, refer to “Performing Basic View Functions” on page 3-4.

## Panel Definition Created by Your Product Administrator

If your panel does not look like any of the previous displays, you are looking at a panel definition created by your product administrator. You can still proceed with the exercises in this book; either choose the appropriate view name from your customized menu or type the desired view name on the **COMMAND** line and press **Enter**.

---

---

# Chapter 3 Using MAINVIEW for UNIX System Services Views

To fully utilize MAINVIEW for UNIX System Services, you must know how to use views. Each view provides critical information about specific components of your UNIX System Services. This chapter describes how to perform basic view functions, examine views, and solve problems using MAINVIEW for UNIX System Services views.

This chapter includes the following topics:

Understanding MAINVIEW for UNIX System Services . . . . .	3-2
Performing Basic View Functions . . . . .	3-4
Using the Process Views . . . . .	3-7
Examining the File System Views . . . . .	3-10
Using System Views . . . . .	3-13
Using User Views . . . . .	3-16

## Understanding MAINVIEW for UNIX System Services

A view is a collection of data gathered by MAINVIEW for UNIX System Services and displayed in an easy-to-read format. It is the result of a query run by the MAINVIEW for UNIX System Services data selectors against the data MAINVIEW for UNIX System Services has collected from the UNIX System Services. Using MAINVIEW for UNIX System Services effectively involves moving between different views to display the information you need.

In most cases, MAINVIEW for UNIX System Services makes it easy for you to display views by using established hyperlinks between related views. You can position the cursor and press **Enter** to move from one view to the next, because MAINVIEW for UNIX System Services has already determined which views you are likely to access next. You can also set your own hyperlinks to establish paths between views once you discover how to optimize the use of each view for your business needs. This procedure is explained in “Setting Hyperlinks” on page 5-9.

MAINVIEW for UNIX System Services further simplifies displaying the data you need through the EZUSS easy menu, a cursor-sensitive view that hyperlinks to an assortment of more specific views and menus. Options on this menu correspond to particular areas of system performance and have been given brief, descriptive names so that you can begin using MAINVIEW for UNIX System Services without having to remember the names of specific views.

In some cases, however, you might need to examine a particular area of system performance immediately, without using hyperlinks. You can do this by typing the name of a view on the **COMMAND** line and pressing **Enter**.

You can display views by performing one of the following actions:

- choosing a menu item from an easy menu
- using a hyperlink
- typing the view name on the **COMMAND** line

Before beginning the exercises in this chapter, review the basic view concepts in the next section.

## Reading the Window Information Line

The MAINVIEW for UNIX System Services window information line helps you keep track of the data displayed in a particular window. Here is a sample window information line:

```
>W1 =PSOVERZ=====DXTSTJ=====*=====15MAR2002=====16:53:58=====MVUSS=====D===20
```

where

>	Indicates that there is more data to the right of the screen.
<	Indicates data to the left.
+	Indicates data to the right and the left.
	A blank indicates all data fits in the current window.
W1	Is the number and status of the window. W1 means that window 1 is in Wait status. To see other possible statuses, place your cursor on W1 and press <b>PF1</b> for help.
PSOVERZ	Is the name of the view.
<i>form name</i>	Appears next to the view name when you use the FORM command to display the data in a different format. In this example, the field is blank. For more information about the FORM command, refer to Chapter 7, "Redisplaying Data without Updating."
DXTSTJ	Indicates the current context. This value can be the name of the current system or a predefined SSI context that can include certain targets.
*	Indicates the current scope. The scope allows you to narrow down a particular system within an SSI context. If you are not using an SSI context, this field contains an asterisk (*).
19MAR2001	Is the date that the data in the window was last updated.
16:53:58	Is the time that the data in the window was last updated.
<i>duration</i>	Appears next to the time field when you use the duration parameter on the TIME command. This field tells you how many minutes of historical data are displayed. In this example, the field is blank. For more information about historical data, see Chapter 4, "Displaying Historical Data."
MVUSS	Indicates the product identifier.
<i>form_location</i>	Shows the location of the form that is being displayed: D—in a distributed library (is in its original form) U—in a user library (has been customized)
20	Indicates the number of rows available in the display. <b>Note:</b> For detail views (views that end in INFO), this number is always 1.

## Performing Basic View Functions

In this section, you will begin using MAINVIEW for UNIX System Services views.

**Step 1** On the **COMMAND** line, type **RESet** and press **Enter**.

This action completely clears the screen.

**Step 2** On the **COMMAND** line, type **EZUSS** and press **Enter**.

The MAINVIEW for UNIX System Services Easy Menu is displayed, as shown in Figure 3-1.

**Figure 3-1** Displaying Processes from the EZUSS Menu

```

DDMMYYYY   HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS  -----
COMMAND  ==>
CURR WIN ==> 1      ALT WIN ==>
W1 =EZUSS=====EUSSM====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====1
                                MVUSS Easy Menu

  Activity                               Utilities
> System                                +-----+ > Alarm Management
> Processes                             | Place cursor on | > MAINVIEW Environment
> Filesystems                           | menu item and  | > MVUSS Fast Menu
> Users                                  | press ENTER   |
. USS Address Spaces                    +-----+ . Return...
. IPC Realtime Activity

  Action Views
> EZ Action Menu

```

**Step 3** To display Processes, under the Activity category place the cursor on the Processes option, and press **Enter**.

Displaying a view by placing the cursor on an option and pressing **Enter** is called hyperlinking. Hyperlinking allows you to quickly move from view to view to access additional information about an activity.

**Note:** You can hyperlink from any column with a highlighted header by placing your cursor on a data element within that column and pressing **Enter**.

The Processes option hyperlinks to the Processes easy menu, EZUPRCS, as shown in Figure 3-2 on page 3-5.

Figure 3-2 EZUPRCS Menu

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==> SCROLL ==> PAGE
CURR WIN ==> 1 ALT WIN ==>
Wl =EZUPRCS=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====1

          Processes Easy Menu

Activity                                     General
. Overview                                     +-----+ . Current Status
. Resource Usage | Place cursor on | . Command Name
. Delays         | menu item and  | . Process Tree
. Execution State | press ENTER   |
          +-----+ . Return...

```

From EZUPRCS you can hyperlink to views that contain data regarding process activities, such as resource usage and delays.

#### Step 4 Hyperlink from the Overview option.

PSOVERZ is displayed, as shown in Figure 3-3.

Figure 3-3 PSOVERZ View

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==> SCROLL ==> CSR
CURR WIN ==> 1 ALT WIN ==>
>Wl =PSOVERZ=====SJSE=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====15
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
1 BPXPINPR 57:37:13 BPXOINIT Yes 100.0 0.00 0.00 0.00 0.0000
2 EZBTCPIP 57:26:17 DC$TCPIP Yes 0.00 100.0 0.00 0.00 0.0000
3 EZBTTSSL 57:26:10 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
4 EZBTMCTL 57:26:09 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
5 EZACFALG 57:26:09 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0343
6 EZASASUB 57:26:08 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0286
7 EZBTTMST 57:26:05 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0085
9 FTPD 57:26:03 DC$FTSRV No 100.0 0.00 0.00 0.00 0.0000
10 PORTMAP 57:25:59 DC$PMAP No 100.0 0.00 0.00 0.00 0.0171
14 DSNVEUS3 02:56:23 DB2JDIST Yes 100.0 0.00 0.00 0.00 0.0000
17 GMMAIN 02:20:10 AAOTC5B No 0.00 100.0 0.00 0.00 0.0000
16777224 SMLoad 57:25:40 AAOAO61 Yes 0.00 100.0 0.00 0.00 0.0000
16777227 BBM9SZ20 57:25:26 DC$PAS Yes 0.00 100.0 0.00 0.00 1.2134
16777232 SMLoad 00:26:56 AAOTC6E Yes 0.00 100.0 0.00 0.00 0.0000
50331663 BBM9SZ20 00:20:55 XUSSKPAS Yes 0.00 100.0 0.00 0.00 2.3953

```

In PSOVERZ, you can see the total delay percentage, the system call rate, owning jobname, and other details for each listed process. You can use this view to determine if any process has an unexpected delay or is executing more system calls than normal. To scroll to the right and see all of the fields, press **PF10** multiple times. To scroll back to the start of the fields, press **PF11**.

**Step 5** Press **Enter** and notice how the data changes.

The data is refreshed every time you press **Enter** (unless you press **Enter** more frequently than the data collection interval established for that view's data elements).

If you are interested in a particular job that is not currently visible on PSOVERZ, rather than explicitly scrolling down, possibly several times, you can move this job to the top of the window by using the Locate (L) command.

You can move any value to the top of the window by typing **L <value>** on the **COMMAND** line, placing the cursor on the appropriate column header, and pressing **Enter**. If the value you are looking for is in the first column, you do not have to use the cursor at all; just type **L <value>** on the **COMMAND** line.

Try this now with one of your own jobs.

**Step 6** On the **COMMAND** line, type **L <jobname>** (where *jobname* is the job name for the process), position the cursor in the Jobname column, and press **Enter**.

The process you specify moves to the top of the view.

**Step 7** To display online help for a view, position the cursor on the view name on the window information line and press **PF1**.

**Step 8** To display online help for a field, position the cursor on the field name for which you want help and press **PF1**.

## Using the Process Views

Process views provide details regarding the process activity and resource utilization for single or multiple intervals. These views reveal delays, overuse of system calls, and other factors that can impact the performance of your system.

The following example illustrates only one use for the process views. For a complete list of process views and their purposes, refer to the *MAINVIEW<sup>®</sup> for UNIX System Services User Guide and Reference*.

The two primary methods to display a process view are

- using the MAINVIEW for UNIX System Services process easy menu
- typing the actual name of the view on the COMMAND line

Both methods ultimately display the same view, but the paths used to reach the view are different.

To access a view using EZUSS, follow these steps:

**Step 1** On the **COMMAND** line, type **EZUSS**.

EZUSS is displayed.

**Step 2** In EZUSS, hyperlink from the Processes option.

EZUPRCS is displayed.

**Step 3** Access PSOVERZ using one of these methods:

- hyperlinking from the Overview option
- typing **PSOVERZ** on the **COMMAND** line

The PSOVERZ view is displayed, as shown in Figure 3-4 on page 3-8.

**Figure 3-4 Looking at Process Activity using the PSOVERZ View**

```

DDMMYYYY  HH:MM:SS  ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS -----
COMMAND  ===>
CURR WIN  ===> 1      ALT WIN  ===>
>W1 =PSOVERZ=====SJSE=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D==15
C ProcessId Command  Elapsed  Jobname  Multi-  Total  Total  Total  Total  Sys Cal
- -----  Name      ProcTime -----  Thread  Dly%   Run%   Zomb%  Othr%   Rat
      2  EZBTCPIP  57:26:17  DC$TCPIP  Yes     0.00  100.0  0.00  0.00  0.0000
      3  EZBTTSSL  57:26:10  DC$TCPIP  No      0.00  100.0  0.00  0.00  0.0000
      4  EZBTMCTL  57:26:09  DC$TCPIP  No      0.00  100.0  0.00  0.00  0.0000
      5  EZACFALG  57:26:09  DC$TCPIP  No     100.0  0.00  0.00  0.00  0.0343
      6  EZASASUB  57:26:08  DC$TCPIP  No     100.0  0.00  0.00  0.00  0.0286
      7  EZBTMST  57:26:05  DC$TCPIP  No      0.00  100.0  0.00  0.00  0.0085
      9  FTPD      57:26:03  DC$FTSRV  No     100.0  0.00  0.00  0.00  0.0000
     10  PORTMAP   57:25:59  DC$PMAP   No     100.0  0.00  0.00  0.00  0.0171
     14  DSNVEUS3  02:56:23  DB2JDIST  Yes    100.0  0.00  0.00  0.00  0.0000
     17  GMMAIN    02:20:10  AAOTC5B   No      0.00  100.0  0.00  0.00  0.0000
    16777224  SMLOAD   57:25:40  AAQAO61   Yes     0.00  100.0  0.00  0.00  0.0000
    16777227  BBM9SZ20 57:25:26  DC$PAS    Yes     0.00  100.0  0.00  0.00  1.2134
    16777232  SMLOAD   00:26:56  AAOTC6E   Yes     0.00  100.0  0.00  0.00  0.0000
    50331663  BBM9SZ20 00:20:55  XUSSKPAS  Yes     0.00  100.0  0.00  0.00  2.3953

```

The PSOVERZ view is a summarized view of process activity. You can use this view to analyze performance and utilization of resources for the selected processes. When studying the PSOVERZ view, you can find out process details, such as how many system calls a process is using or what type of delays have affected a process.

Suppose you scroll to the right, discover an unusual delay, and want to pinpoint the cause. From the Total Dly% column, hyperlink from the process with the delay.

The PSDELAYZ view with information about that process is displayed, as shown in Figure 3-5 on page 3-9.

Figure 3-5 PSDELAYZ View

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =PSOVERZ==PSDELAYZ=SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D=====
C  ProcessId Command  Elapsed  Jobname          Total Delay % Total Total %Delay
-  ----- Name      ProcTime  -----          0...50...100 Zomb% Othr% MsgRcv
      6  inetd      08:45:54  INETD4    100.00          0.00  0.00  0.00

```

With the PSDELAYZ view, you can see how much of the total delay is attributable to each of the major resource categories for the selected processes. (You will need to scroll the screen to the right to see additional resource categories.)

## Examining the File System Views

You can use the file system views to monitor the files and directories of specified file systems, including hierarchical file systems.

To determine which file systems are currently mounted, follow these steps:

**Step 1** On the **COMMAND** line, type **FSMOUNTZ**.

You can also hyperlink to the FSMOUNTZ view or select it from the MAINVIEW list.

The FSMOUNTZ view is displayed, as shown in Figure 3-6.

**Figure 3-6 FSMOUNTZ View**

```
DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ===>                                     SCROLL  ===> PAGE
CURR WIN  ===> 1           ALT WIN  ===>
>W1 =FSMOUNTZ=====SJSC=====DDMMYYYY==HH:MM:SS===MVUSS===D===53
C File System Dataset Name                               Type FS  Read   Total %Blks %B
- -----
*AMD/u                                                    MVS  AUTO No     1  0.00
SYSI.IBMOEM.SMS.OS280.SJSC.OMVS.ROOT                     MVS  HFS  No   198000 21.78
SYSI.IBMOEM.SMS.SYSC.USER.HFS                            MVS  HFS  No   63000 45.43
SYSI.IBMCIC13.SMS.SYSC.USERLIB                           MVS  HFS  No    3600 52.17
SYSI.IBMOEM.SMS.USSMON.HFS                               MVS  HFS  No   45000 61.05
SYSI.IBMOEM.SMS.OS280.SJSC.ETC                           MVS  HFS  No   10800 97.65
```

The FSMOUNTZ view lists all the file systems that are currently mounted.

**Step 2** Since everything appears to be normal, you scroll to the right three times to see more information, as shown in Figure 3-7.

**Figure 3-7 FSMOUNTZ View (Scrolled to the Right)**

```
DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ===>                                     SCROLL  ===> PAGE
CURR WIN  ===> 1           ALT WIN  ===>
+W1 =FSMOUNTZ=====SJSC=====DDMMYYYY==HH:MM:SS===MVUSS===D===77
C File System Dataset Name                               FileSys      Mount Point
- -----
*AMD/u                                                    Active       /u
SYSI.IBMOEM.SMS.OS280.SJSC.OMVS.ROOT                     Active       /
SYSI.IBMOEM.SMS.SYSC.USER.HFS                            Active       /eng
SYSI.IBMCIC13.SMS.SYSC.USERLIB                           Active       /usr/lpp/cicsts
SYSI.IBMOEM.SMS.USSMON.HFS                               Active       /ussmon
SYSI.IBMOEM.SMS.OS280.SJSC.ETC                           Active       /etc
```

Using the S line command, you can display FSPACE for more information about the files and subdirectories within a specific directory.

- Step 3** Place an **S** in the line command column for one of the file systems that has a mount point of **/eng**, and press **Enter**.

The FSPACE view is displayed, as shown in Figure 3-8.

**Figure 3-8 FSPACE View**

```
DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS  -----
COMMAND  ==>
CURR WIN ==> 1      ALT WIN ==>
>Wl =FSPACE=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====27
C File or Dir Name Type   File Ser Number      Size Size Block      Owner
- -----
.          DIR             146      28672  7  4096      0
..         DIR             15       8192  2  4096      0
baodmd1   DIR              7        2      8192  2  4096      0
baodmd2   DIR              8        2      8192  2  4096      0
baodmd3   DIR              9        2      8192  2  4096      0
baodmd4   DIR             10        2      8192  2  4096      0
baodym1   DIR             11        2      8192  2  4096      0
baodym2   DIR             12        2      8192  2  4096      0
baodym3   DIR             13        2      8192  2  4096      0
baodym4   DIR             14        2      8192  2  4096      0
baodym5   DIR             15        2      8192  2  4096      0
baodym6   DIR             16        2      8192  2  4096      0
baoeuk1   DIR             17        2      8192  2  4096      3911
baoeuk2   DIR             18        2      8192  2  4096      0
baoeuk3   DIR             19        2      8192  2  4096      0
baoeuk4   DIR             20        2      8192  2  4096      0
baoexp1   DIR             21        2      8192  2  4096      0
baoexp2   DIR             22        2      8192  2  4096      0
```

By looking at this view, you can determine more information about the contents of **/eng**. You can continue to drill down the directories for additional details about a file or subdirectory.

When you request information, MAINVIEW for UNIX System Services might not provide an immediate response. For whatever reason, if a delay has occurred while completing the request, MAINVIEW for UNIX System Services places the process in the background so you can continue to work rather than tying up your session while the request is handled.

- Step 4** To monitor the status of your requests at any time, type **REQSTAT** on the **COMMAND** line.

The REQSTAT view is displayed, as shown in Figure 3-9 on page 3-12.

Figure 3-9 REQSTAT View

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS  -----
COMMAND  ===>
CURR WIN  ===> 1          ALT WIN  ===>
W1 =REQSTAT=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===1=====
C  Request Request      Request      Start   Create      Last      CPU View   Parm
-   Time Status      Type          Time     Time      Access    Time -----
    12:19:54 Completed  Detail Dir  12:19:54 12:19:54 12:19:54 0.064880 FSPACE  /bin/

```

By looking at the REQSTAT view, you can see that your request has been completed. From the **Request Time** field, you can hyperlink to the view that contains the completed request. If the request had not been completed, you could have returned to this view any number of times to monitor your request or purge the request if the information was no longer needed.

For information about the action commands associated with the REQSTAT view, place your cursor on the view name and press **PF1**. In the Help panel, hyperlink from Actions available from this view.

## Using System Views

The address space views contain activity information about the address spaces, including delays and usage. The data is available in both summarized and tabular form.

In addition, the BPXPRM and IPCBPXP views contain system parameter information.

To view the parameter settings, follow these steps:

**Step 1** On the **COMMAND** line, type **BPXPRM**.

The BPXPRM view is displayed, as shown in Figure 3-10.

**Figure 3-10** BPXPRM View

```

DDMMYYYY  HH:MM:SS  ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS -----
COMMAND  ==>>                                     SCROLL ==>> CSR
CURR WIN ==>> 1          ALT WIN ==>>
W1 =BPXPRM=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====U====1
System Name.....          SJSC
Sysplex Name.....        BBPLEX01  Change Config....
-Processes/System-
MAXPROCSYS.....          300  ---UIDs/System---
Current #.....           76  MAXUIDS.....          200
Current %.....          25.3  Current #.....          3
Interval Maximum.        76  Current %.....          1.5
Interval Average.        76  Interval Maximum.      3
Intvl Exceed Cnt.        0  Interval Average.      3
Intvl Exceed Rate        0  Intvl Exceed Cnt.      0
--Files/Process--
MAXFILEPROC.....        1000  --Processes/UID--
Current #.....           2  MAXPROCUSER.....      25
Current %.....           0.2  Current #.....          15
Interval Maximum.        2  Current %.....          60.0
Interval Average.        2  Interval Maximum.      15
-Threads/Process--
MAXTHREADTASKS...        1000  Interval Average.      15
MAXTHREADS.....          1000  Intvl Exceed Cnt.      0
-----MMap Pages-----
MAXMMAPAREA.....        4096  Intvl Exceed Rate      0
---Pseudo TTYS---
Current #.....           0  MAXPTYS.....          256
Current %.....           0.0  ---Remote TTYS---
Interval Maximum.        0  MAXRTYS.....          256
Interval Average.        0  MAXFILESIZE.....      UNLIMITED
Intvl Exceed Cnt.        0  MAXCORESIZE.....      4.0Mi
Intvl Exceed Rate        0  MAXASSIZE.....        UNLIMITED
----SharePages----
MAXSHAREPAGES...        31.2Mi
Current #.....           313
Current %.....           0.0
Interval Maximum.        313
Interval Average.        313
Intvl Exceed Cnt.        0
Intvl Exceed Rate        0

```

The BPXPRM view lists the UNIX system parameter settings, current counts, and number of attempts to exceed limits.

- Step 2** To find out additional information, such as shared memory data or semaphores activity, display the IPCBPXP view.

**Figure 3-11 IPCBPXP View**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>                                     SCROLL ==> CSR
CURR WIN ==> 1          ALT WIN ==>
W1 =IPCBXP=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====1
System Name....      SJSC
Sysplex Name....    BBPLEX01  Change Config..

-Msg Queue Ids..      -Shr Mem Segmnts          -Semaphore Sets.
IPCMSGNIDS.....      20000 IPCSHMNIDS.....      20000 IPCSEMNIIDS.....      20000
Current #.....      6 Current #.....      0 Current #.....      0
Current %.....      0.0 Current %.....      0.0 Current %.....      0.0
Interval Max...      6 Interval Max...      0 Interval Max...      0
Interval Avg...      6 Interval Avg...      0 Interval Avg...      0
Intvl Exceed Ct      0 Intvl Exceed Ct      0 Intvl Exceed Ct      0
Intvl Exceed Rt      0 Intvl Exceed Rt      0 Intvl Exceed Rt      0
-Messages/Msg Q.     -Shrd Mem Pages.         -Semaphores/Set.
IPCMSGQNUM....      10000 IPCSHMSPAGES...      262144 IPCSEMNSEMS....      25
-Bytes/Msg Queue     Current #.....          0 -Semaphores Ops.
IPCMSGQBYTES...      262144 Current %.....          0.0 IPCSEMNOPTS.....      32767
Interval Max...      0
Interval Avg...      0
Intvl Exceed Ct      0
Intvl Exceed Rt      0
-ShrMemPages/Sgmt
IPSHMMPAGES...      25600
-Segmnts/AddrSpc
IPSHMNSEGS....      1000

```

## Dynamically Changing Parameter Setting

The BPXPRM and IPCBPXP views each have a hyperlink field called **Change Config** (see Figure 3-10 on page 3-13 and Figure 3-11 on page 3-14). This hyperlink goes to the panel shown in Figure 3-12.

**Figure 3-12 Change UNIX Configuration Settings**

```

----- Change UNIX Configuration Settings -----
COMMAND ===>

Change one or more of the following limits.

MAXASSIZE      2147483647      IPCMSGQBYTES      262144      20000
MAXCORESIZE    4194304        IPCMSGNIDS        20000      0
MAXCPUPTIME    2147483647      IPCMSGQNUM        10000      0.0
MAXFILEPROC    1000          IPCSEMNUM         10000      0
MAXFILESIZE    UNLIMITED      IPCSEMSEMS        25          0
MAXMMAPAREA    4096          IPCSEMSEMS        25          0
MAXPROCSYS     300          IPCSEMSEMS        25          0
MAXPROCUSER    25           IPCSEMSEMS        25          0
MAXPTY         256          IPCSEMSEMS        25          0
MAXSHAREPAGES  32768000      IPCSEMSEMS        25          25
MAXTHREADS     1000        IPCSEMSEMS        25          25
MAXTHREADTASKS 1000        IPCSEMSEMS        25          25
MAXUIDS        200          IPCSEMSEMS        25          25

Type END to modify any changed values,
      CANCEL to quit without making changes.

```

This panel is an ISPF panel. You can overtype the number, and MAINVIEW for UNIX System Services will issue a SETOMVS operator command to change the setting when you press **END**.

## Using User Views

MAINVIEW for UNIX System Services includes a series of user views that show you such things as the length of time a user has been logged in for a single session, the number of processes a user has running, or if a user is currently idle.

To see the processes based on the user IDs, follow these steps:

**Step 1** On the **COMMAND** line, type **USROVERZ**.

The **USROVERZ** view is displayed, as shown in Figure 3-13.

**Figure 3-13 USROVERZ View**

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS  -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =USROVERZ=====SJSC=====*****DDMMYYYY==HH:MM:SS====MVUSS====D====10
SAF      Total Total Total Total  Sys Call Interval#  Avg#  Max#
Userid   Dly%  Run%  Zomb% Othr%   Rate Sys Calls VNodes Vnodes
BITSTC   100.0  0.00  0.00  0.00   0.00000  0  0.00  0
BOLSTC   100.0  0.00  0.00  0.00   0.00000  0  0.00  0
IBMUSER  66.67  0.00  0.00  33.33   0.00000  0  0.00  200000
MQSSTC   12.50  87.50  0.00  0.00   0.00000  0  0.00  0
MVSSTC   0.00  100.0  0.00  0.00   3.45255  4622  0.00  0
NFSSTC   15.38  15.38  0.00  69.23   0.00155  9  0.00  200000
OLTSTC   50.00  50.00  0.00  0.00   0.18040  161  0.00  0
PASSTC   0.00  100.0  0.00  0.00   0.49973  446  0.00  0
TSGSTC   50.00  50.00  0.00  0.00   0.78489  1401  0.00  0
WEBSRV   42.86  57.14  0.00  0.00   0.15270  477  0.00  0

```

The **USROVERZ** view displays all information for a user session. After looking at **USROVERZ**, you want to know which sessions the data is from.

**Step 2** To hyperlink to the **USRSESSZ** view, place your cursor on a member of the **SAF Userid** field.

The **USRSESSZ** view is displayed, as shown in Figure 3-14 on page 3-17.

Figure 3-14 USRSESSZ View

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
W1 =USROVERZ=USRSESSZ=SJSC=====DDMMYYYY==HH:MM:SS===MVUSS===D===2
SAF      Session  Total  Total  Total  Total  Sys Call Interval#  Avg#  Max#
Userid   ID      Dly%  Run%  Zomb%  Othr%   Rate  Sys Calls  VNodes  Vnodes
IBMUSER      6 100.0  0.00  0.00  0.00   0.00000      0  0.00    0
IBMUSER  33554436  0.00  0.00  0.00 100.0   0.00000      0  0.00    0
IBMUSER      1 100.0  0.00  0.00  0.00   0.00000      0  0.00 200000

```

The USRSESSZ view provides both the user ID and session ID for the processes.



---

---

# Chapter 4    Displaying Historical Data

MAINVIEW for UNIX System Services offers a version of data called historical data, which is described in this chapter. Historical data shows you the system as it existed an hour ago, yesterday, last week, last month, or last year.

This chapter includes the following topics:

Determining Data Availability .....	4-2
Using the TIME Command. ....	4-3
Displaying Data from Multiple Intervals .....	4-7
Moving Quickly between Intervals. ....	4-12
Understanding the Time and Duration Fields.....	4-14
Determining When Data Was Collected.....	4-15

Historical data consists of your data from a specified recent interval and its preceding intervals. Using the TIME command, you can specify intervals from any time frame for which data exists on your system. You can also use certain fields to determine when the data was collected and to hyperlink to particular time frames.

## Determining Data Availability

When you need historical data, you must make sure the data is available in one of the currently allocated historical data sets.

» To see available historical data, type **DSL** on the **COMMAND** line.

DSL is displayed, as shown in Figure 4-1.

**Figure 4-1 DSL**

```

DDMMYYYY   HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS  -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =DSLST=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====3
C DDNAME   From Date  Time  To Date    Time  Rec Status Pending  Data set name
-----
HISTDS02  22SEPYYYY  09:45  22SEPYYYY  11:45  Yes Active  *****  BB.ENGK.IMAGSY
HISTDS01  21SEPYYYY  17:45  22SEPYYYY  09:45  Yes Closed  *****  BB.ENGK.IMAGSY
HISTDS03  20SEPYYYY  21:45  21SEPYYYY  17:45  Yes Closed  *****  BB.ENGK.IMAGSY

```

You should check DSL before using the TIME command because if you specify the TIME command for an unavailable date and time, you will get an error message.

Data from recording intervals between From Date and To Date might not be available for any of the following reasons:

- Data was not collected.
- Data is offline.
- Data was overwritten by new data.
- Data set has an error.

If you do not see the date or time that you want on the DSL view, the data set you need might have been archived either on tape or in an offline data set. It can also mean the data has been purged. To find out, see your product administrator. (If you are the administrator, see the *MAINVIEW<sup>®</sup> Administration Guide*.)

## Using the TIME Command

You use the TIME command to specify the intervals of historical data that you want to display. The syntax for the command is

```
TIME [date time [duration|NEXT|PREV]] [DOW mask TOD mask]
```

where date and time specify the date and time at the end of the interval at which you want to look (an interval being a 15-minute period). For example, to see data collected between 9:00 and 10:00, you would specify 10:00 as the time and 4I as the number of intervals (duration).

An alternative way to use the TIME command is to type **TIME** on the **COMMAND** line and press **Enter**. This action opens a dialog box, Set Time Frame, as shown in Figure 4-2.

**Figure 4-2 Set Time Frame Dialog Box**

```
DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ===>                                     SCROLL  ===> PAGE
CURR WIN  ===> 1           ALT WIN  ===>
>W1 =FSMOUNTZ=====DXTSTJ===*=====DDMMYYYY==HH:MM:SS====MVUSS====D===30

----- SET TIME FRAME -----
COMMAND  ===>

Requested Time Frame:
End Date  ===> *           (*, =, or ddmmmyyyy)
End Time  ===> *           (*, =, or hh:mm)
Duration  ===> 1I         (*, =, NEXT, PREV, TODAY, MONTH,
                          nnnnI, nnnnM, nnnnH, nnnD, or nnW)
DOW Mask  ===> EVERYDAY   (EVERYDAY, WEEKDAYS, WEEKENDS)
TOD Mask  ===> ALLDAY     (ALLDAY, PRIMESHIFT, SWINGSHIFT,
                          GRAVEYARDSHIFT)

Data in the Requested Time Frame:
Interval  ===> 1M         (Length, in minutes, of one interval)
End Date  ===> 16SEPYYY   (End date of data)
End Time  ===> 15:44      (End time of data)
Duration  ===> 1M         (Minutes spanned by data)
DOW Mask  ===> EVERYDAY   (Day-of-week mask)
TOD Mask  ===> ALLDAY     (Time-of-day mask)

Type END to set the window's requested time frame
```

The default values are

- today's date
- current time
- duration of one recording interval
- day-of-week mask set to EVERYDAY
- time-of-day mask set to ALLDAY

These selections specify the current interval, not the historical mode.

**To Look at Historical Data:**

1. Change the value for **End Date**.
2. Change the value for **End Time**.
3. Change the value for **Duration**.
4. To return to the view, press **PF3**.

**Note:** Overtyping the current DOW Mask and TOD Mask to specify the desired days and shifts.

Here is an example using the TIME command with date and time parameters:

**Step 1** Display the FSMOUNTZ view in window 1.

**Step 2** To open a second window:

**2.A** On the **COMMAND** line, type **HS**.

**2.B** Position the cursor partway down the display, where you want the next view to appear, and press **Enter**.

The display splits horizontally, as shown in Figure 4-3.

**Figure 4-3** FSMOUNTZ with an Open Window

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>>
CURR WIN ==>> 2          ALT WIN ==>>
>W1 -FSMOUNTZ-----SJSC-----*-----DDMMYYYY--HH:MM:SS---MVUSS---D---6
C File System Dataset Name                               Type FS  Read  Total %Blks %B
- -----
*AMD/u                                                    MVS AUTO No      1 0.00
SYSI.IBMOEM.SMS.OS280.SJSC.OMVS.ROOT                    MVS HFS No    198000 21.78
SYSI.IBMOEM.SMS.SYSC.USER.HFS                           MVS HFS No     63000 45.43
SYSI.IBMCIC13.SMS.SYSC.USERLIB                          MVS HFS No     3600 52.17
SYSI.IBMOEM.SMS.USSMON.HFS                              MVS HFS No     45000 61.05
SYSI.IBMOEM.SMS.OS280.SJSC.ETC                          MVS HFS No     10800 97.65

T2 =====

```

In the window information line, the current time is displayed as 15:36:32.

**Step 3** Display FSMOUNTZ in window 2.

Make sure that yesterday's date and time are contained in one of the currently allocated historical data sets.

**Step 4** On the **COMMAND** line, type **TIME** to set the time frame for window 2.

The Set Time Frame dialog box is displayed.

**Figure 4-4 Set Time Frame Dialog Box**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ==>
CURR WIN ==> 2          ALT WIN ==>
>W1 -FSMOUNTZ-----SJSC-----*-----DDMMYYYY--HH:MM:SS----MVUSS----D----6

----- SET TIME FRAME -----
COMMAND  ==>

Requested Time Frame:
End Date ==> *          (*, =, or ddmmmyyyy)
End Time ==> *          (*, =, or hh:mm)
Duration ==> 1I        (*, =, NEXT, PREV, TODAY, MONTH,
                        nnnnI, nnnnM, nnnnH, nnnD, or nnW)
DOW Mask ==> EVERYDAY  (EVERYDAY, WEEKDAYS, WEEKENDS)
TOD Mask ==> ALLDAY    (ALLDAY, PRIMESHIFT, SWINGSHIFT,
                        GRAVEYARDSHIFT)

Data in the Requested Time Frame:
Interval ==> 15M       (Length, in minutes, of one interval)
End Date ==> 17MAYYYY  (End date of data)
End Time ==> 16:50     (End time of data)
Duration ==> 15M       (Minutes spanned by data)
DOW Mask ==> EVERYDAY  (Day-of-week mask)
TOD Mask ==> ALLDAY    (Time-of-day mask)

Type END to set the window's requested time frame

```

**Step 5** Type yesterday's date in the **End Date** field under the Requested Time Frame.

In this example, yesterday's date was March 16.

Be sure to specify the date in the same format as the date in the upper left-hand corner of your panel. For example, 16 MAR 2001.

**Step 6** To return to the view as shown in Figure 4-5 on page 4-6, press **PF3**.

Figure 4-5 FSMOUNTZ in Two Time Periods

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>
CURR WIN ==> 2          ALT WIN ==>
SCROLL ==> PAGE
>W1 -FSMOUNTZ-----SJSC-----*-----DDMMYYYY--HH:MM:SS---MVUSS---D---
C File System Dataset Name                Type FS  Read  Total %Blks %
----- Type Only  Blocks Free U
*AMD/u                                     MVS AUTO No      1  0.00
SYSI.IBMOEM.SMS.OS280.SJSC.OMVS.ROOT      MVS HFS No     198000 21.78
SYSI.IBMOEM.SMS.SYSC.USER.HFS             MVS HFS No      63000 45.43
SYSI.IBMCIC13.SMS.SYSC.USERLIB            MVS HFS No       3600 52.17
SYSI.IBMOEM.SMS.USSMON.HFS                MVS HFS No      45000 61.05
SYSI.IBMOEM.SMS.OS280.SJSC.ETC            MVS HFS No      10800 97.65
>H2 =FSMOUNTZ=====SJSC=====*=====DDMMYYYY==HH:MM:SS===MVUSS===D===
C File System Dataset Name                Type FS  Read  Total %Blks %
----- Type Only  Blocks Free U
*AMD/u                                     MVS AUTO No      1  0.00
SYSI.IBMCIC13.SMS.SYSC.USERLIB            MVS HFS No       1800 19.44
SYSI.IBMOEM.SMS.OS280.SJSC.OMVS.ROOT      MVS HFS No     198000 21.78
SYSI.IBMOEM.SMS.SYSC.USER.HFS             MVS HFS No      63000 45.43
SYSI.IBMOEM.SMS.USSMON.HFS                MVS HFS No      45000 61.05
SYSI.IBMOEM.SMS.OS280.SJSC.ETC            MVS HFS No      10800 97.65

```

You are now looking at two versions of FSMOUNTZ: one as the system exists at this moment and one as it existed yesterday at the same time. Notice that the time set for window 2 is actually 17:00, which is when the interval ended. With the two intervals displayed in the same screen, it is easy to compare the two to see if a perceived problem is a regular occurrence or just an abnormality.

Notice that the window status indicator for window 2 changed from W2 to H2. The H stands for *historical data*.

**Step 7** Press **Enter**.

Notice that, although the data in window 1 is updated, the data in window 2 is not. Historical data cannot be updated because it represents the system at a fixed point in time.

**Note:** Once you have used the TIME command or the SET TIME FRAME dialog box for a window, all the views sent to that window reflect the system as it existed at the date and time you specified. This remains true until you issue another TIME command, close the window, or press **PF3**.

For more examples of using the TIME command, see the *MAINVIEW® for UNIX System Services User Guide and Reference*.

## Displaying Data from Multiple Intervals

With the `TIME` command, you can look at data as it existed at the end of an interval. If you want to see data spanning a greater period of time, you can use the `TIME` duration parameter along with the date and time parameters.

The syntax for the `TIME` command is

```
TIME [date time [duration|NEXT|PREV]] [DOW mask|TOD mask]
```

where `duration` is the period of time over which you want to draw data.

The syntax for the duration parameter is

```
nnnu
```

where

*nnn* Indicates the number of hours, minutes, or intervals in the duration.

*u* Indicates the unit of time:

- I (intervals)
- M (minutes)
- H (hours)
- D (up to 416 days)
- W (up to 59 weeks)

Parameter values include

`TODAY` OR `TDAY` Specifies today's intervals since midnight.

`MONTH` Specifies one month.

`*` Changes the duration back to the default, which is one interval.

`=` Keeps the duration at its current value.

**Note:** You can use an asterisk (\*) or an equal (=) sign in place of the time, date, or duration parameters. An asterisk means that you want to return to the default value, which is the current date and time or one interval. An equal sign means you want to keep whatever was previously specified.

Suppose you get a phone call from someone complaining that a process was using an excessive amount of resources between 9:45 A.M. and 10:00 A.M. today. The process tends to demonstrate the same amount of resource usage each day, so the complaint indicates a potential problem.

To see if a problem existed yesterday at the same time, compare today's processes with command names beginning with CSQ between 9:45 A.M. and 10:00 A.M. to yesterday's processes with command names beginning with CSQ between 9:45 A.M. and 10:00 A.M. Perhaps something occurs regularly during this period that would explain the spike.

**To Do a Comparison:**

**Step 1** To clear the screen, type **RESet**.

Determine what the system was doing today between 9:45 A.M. and 10:00 A.M.

**Step 2** To set the interval for window 1, type **PSUSE** on the **COMMAND** line and press **Enter**.

Since there are so many processes listed, you decide to focus on the ones whose command names begin with CSQ\*.

**Step 3** On the **COMMAND** line, type **PSUSE CSQ\*** and press **Enter**.

Only the processes with command names beginning with CSQ are displayed.

**Step 4** On the **COMMAND** line, type this **TIME** command and press **Enter**:

**TIME \* 10:00 1I**

where

\* indicates that you want today's date

**10:00 1I** indicates that you want to summarize data for the one interval period (1I) ending at 10:00 A.M.

**Step 5** Type **INclude TIME** and press **Enter**.

The panel displayed looks like Figure 4-6 on page 4-9.

**Figure 4-6 PSUSE with a Duration of One Interval**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS -----
COMMAND ==>                                     SCROLL ==> PAGE
CURR WIN ==> 1           ALT WIN ==>
>H1 =PSUSE=====SJSC=====*=====DDMMYYYY==HH:MM:SS==MVUSS====D====8
C  ProcessId Intvl Command Elapsed Jobname Running % Sys Call Int
-  ----- Time- Name ProcTime ----- 0...50...100 Rate Sys
      63 10:00 CSQXJST 02:10:25 CSQACHIN 100.0 0.00000
      64 10:00 CSQXDISP 02:10:25 CSQACHIN 100.0 0.00000
      65 10:00 CSQXDISP 02:10:25 CSQACHIN 100.0 0.00000
      66 10:00 CSQXDISP 02:10:25 CSQACHIN 100.0 0.00000
      67 10:00 CSQXDISP 02:10:25 CSQACHIN 100.0 0.00000
      68 10:00 CSQXDISP 02:10:25 CSQACHIN 100.0 0.00000
      70 10:00 CSQXTNSV 02:10:25 CSQACHIN 100.0 0.00000
      69 10:00 CSQXRCTL 02:10:25 CSQACHIN 0.00 0.00000
    
```

There are several important things to note about this panel:

- One row of data is returned for each entity.
- The **Intvl Time** field indicates the ending time of the data collection interval for every row.
 

**Note:** To always display the **Intvl Time** field, refer to “Automatically Including the Intvl Time Field” on page 4-11.
- The time field on the window information line contains the time the specified interval ended. In this case, the last interval ended at 10:00.
- Since you are only studying one interval, there is no duration field. If you were looking at a longer period of time, say one hour, the duration field on the window information line would indicate how many minutes were spanned by the data in the view. For example, if you specified 1 hour, 4 intervals would be available. Since each interval is fifteen minutes, the number of minutes is 60 (60M).
- An arrow appears at the beginning of the window information line to indicate that the fields pushed to the right by the **Intvl Time** field are still available by scrolling.

- Step 6** Open a second window so you can see what the CSQ processes were doing yesterday between 9:45 A.M. and 10:00 A.M.
- Step 7** Check to make sure that yesterday’s date and time are contained in one of the currently allocated historical data sets.
- Step 8** Display PSUSE in window 2.
- Step 9** On the **COMMAND** line, type **TIME**.

The Set Time Frame dialog box appears, as shown in Figure 4-7.

**Figure 4-7 Changing the Date in the Set Time Frame Dialog Box**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS -----
COMMAND  ==>                                     SCROLL ==> PAGE
CURR WIN ==> 2          ALT WIN ==>
>H1 -PSUSE-----SJSC-----*-----DDMMYYYY==HH:MM:SS----MVUSS----D----8

----- SET TIME FRAME -----
COMMAND  ==>

Requested Time Frame:
  End Date ==> 16MarYYYY      (*, =, or ddmmmyyyy)
  End Time ==> 10:00         (*, =, or hh:mm)
  Duration ==> 1I           (*, =, NEXT, PREV, TODAY, MONTH,
                             nnnnI, nnnnM, nnnnH, nnnD, or nnW)
  DOW Mask ==> EVERYDAY     (EVERYDAY, WEEKDAYS, WEEKENDS)
  TOD Mask ==> ALLDAY       (ALLDAY, PRIMESHIFT, SWINGSHIFT,
                             GRAVEYARDSHIFT)

Data in the Requested Time Frame:
  Interval ==> 15M          (Length, in minutes, of one interval)
  End Date ==> 17MAYYYYY    (End date of data)
  End Time ==> 17:13        (End time of data)
  Duration ==> 15M          (Minutes spanned by data)
  DOW Mask ==> EVERYDAY     (Day-of-week mask)
  TOD Mask ==> ALLDAY       (Time-of-day mask)

Type END to set the window's requested time frame
  CANCEL to quit without setting
    
```

**Step 10** In the Set Time Frame dialog box, change the date to yesterday's date.

When changing the date, follow the format in the parentheses to the right of the field.

**Step 11** Verify that the **End Time** is still 10:00.

**Step 12** Press **PF3** to return to the main window.

**Step 13** Type **INclude TIME** and press **Enter**.

**Step 14** Study the panel to determine if there was also high resource usage for the processes running the CSQ command yesterday between 9:45 A.M. and 10:00 A.M. and try to determine the cause of the activity. Pay particular attention to the system call rate. A higher system call rate indicates greater resource usage.

### Automatically Including the Intvl Time Field

If you want to automatically include the **Intvl Time** field in every view, the field can be added by completing the following steps:

- Step 1** From the MAINVIEW Selection Menu, select Option **0**, Parameters.
- Step 2** From the Terminal Session Parameter Select Menu, select Option **1**, Windows Mode.
- Step 3** From the MAINVIEW Parameter Editors Menu, select Option **2**, Display.
- Step 4** Use the **Tab** key to move to the **Show Time** field.
- Step 5** Type **Y**.
- Step 6** To save your updates, press **End**.

To hide the field from views when you do not want it displayed, on the **COMMAND** line type **EXclude TIME**. To redisplay the field, type **INclude TIME**.

**Note:** If you want to see the date that the data was gathered, use the **INclude DATE** command to reveal the **Intvl Date** field. This command is primarily useful if your time frame spans more than a 24-hour period.

## Moving Quickly between Intervals

In order to effectively compare intervals and associated system performances, you must be able to move quickly between intervals to determine how long an abnormal activity lasted or what intervals it affected. You can use the **NEXT** and **PREV** parameters to move quickly between intervals.

Both **NEXT** and **PREV** use the duration that was last specified to move the interval either forward (**NEXT**) or backward (**PREV**) by the same amount.

### To Move the Intervals:

For example, you might notice something while studying **PSUSE** and want to see what the system was doing in the previous interval.

- Step 1** Horizontally split the display about halfway down.
- Step 2** In window 2, display **PSUSE**.
- Step 3** On the **COMMAND** line, type **TIME = = PREV** and press **Enter**.

**Note:** Be sure to insert a space between each parameter.

The panel looks like Figure 4-8 on page 4-13.

Figure 4-8 Using TIME PREV to Cycle through Intervals

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>
CURR WIN ==> 2          ALT WIN ==>
>W1 -PSUSE-----SJSC-----*-----DDMMYYYY--HH:MM:SS---MVUSS---D---44
C ProcessId Command Elapsed Jobname Running % Sys Call Interval#
- ----- Name ProcTime ----- 0....50...100 Rate Sys Calls
      8 EZBTCPIP 17:28:11 DC$TCPIP 100.0 0.00000 0
      9 EZBTSSL 17:28:06 DC$TCPIP 100.0 0.00000 0
     10 EZBTMCTL 17:28:05 DC$TCPIP 100.0 0.00000 0
     27 TCPMOMVS 17:27:59 XTSTIPAS 100.0 0.99173 681
     30 BBM9SZ20 17:27:46 DC$PAS 100.0 3.01159 2068
     63 CSQXJST 09:52:01 CSQACHIN 100.0 0.00000 0
     64 CSQXDISP 09:52:01 CSQACHIN 100.0 0.00000 0
     65 CSQXDISP 09:52:01 CSQACHIN 100.0 0.00000 0
     66 CSQXDISP 09:52:01 CSQACHIN 100.0 0.00000 0
>H2 =PSUSE=====SJSC=====*=====DDMMYYYY==HH:MM:SS===MVUSS===D===47
C ProcessId Command Elapsed Jobname Running % Sys Call Interval#
- ----- Name ProcTime ----- 0....50...100 Rate Sys Calls
      8 EZBTCPIP 17:16:44 DC$TCPIP 100.0 0.00000 0
      9 EZBTSSL 17:16:39 DC$TCPIP 100.0 0.00000 0
     10 EZBTMCTL 17:16:38 DC$TCPIP 100.0 0.00000 0
     27 TCPMOMVS 17:16:32 XTSTIPAS 100.0 0.99221 897
     30 BBM9SZ20 17:16:19 DC$PAS 100.0 3.28857 2973
     63 CSQXJST 09:40:34 CSQACHIN 100.0 0.00000 0
     64 CSQXDISP 09:40:34 CSQACHIN 100.0 0.00000 0
     65 CSQXDISP 09:40:34 CSQACHIN 100.0 0.00000 0
     66 CSQXDISP 09:40:34 CSQACHIN 100.0 0.00000 0
     67 CSQXDISP 09:40:34 CSQACHIN 100.0 0.00000 0
     68 CSQXDISP 09:40:34 CSQACHIN 100.0 0.01659 15
     70 CSQXTNSV 09:40:34 CSQACHIN 100.0 0.00000 0
     76 TCPMHFSS 07:18:11 XTSTJPAS 100.0 0.00221 2
    16777218 GFSCMAIN 17:16:32 DC$NFSC 100.0 0.00000 0
    16777219 BPXVCLNY 17:16:33 DC$NFSC 100.0 0.00000 0

```

The current window was set to 2, so check the window 2 information line. It now says 17:30, while window 1 shows 17:41.

In this example, we compared the current time to a previous time. You can also compare two historical times and continue to type NEXT and PREV to move around the different intervals.

**Note:** If you are looking at the current time, you cannot look at the NEXT time because no data has been created yet.

You might want to define a PF key to TIME == PREV or TIME == NEXT so you can step through subsequent intervals in historical mode with a single key and access the data more quickly.

## Understanding the Time and Duration Fields

You might find that the time and duration fields on the window information line do not always contain the values you expect. The fields reflect the actual data displayed, which might not be the same as what you requested on the TIME command.

For example, if it is 9:00 A.M. and you want to look at PSOVERZ to determine which processes were active between 5:00 A.M. and 8:00 A.M. this morning, display PSOVERZ, and then type this command:

```
TIME * 8:00 3h
```

After doing so, you expect the window information line to look like this:

```
>W1 =PSOVERZ=====SJSC=====*=*****14SEPYYYY==8:00=180M====MVUSS====D==59=====
```

8:00 is the last interval in the duration you requested; the three-hour period you are interested in is equivalent to 180 minutes.

However, the window information line actually looks like this:

```
>W1 =PSOVERZ=====SJSC=====*=*****14SEPYYYY==7:15=115M====MVUSS====D==59=====
```

Data is not always available for the intervals that you request. Sometimes the PAS is shut down in the middle of a recording interval. An event like this creates gaps in the data recorded to the historical data set. The data that appears on the window information line represents the data that is *actually displayed*.

In our example, 7:15 A.M. was the last interval within the interval for which data was recorded. There was no data recorded at 7:30 A.M., 7:45 A.M., and 8:00 A.M., so the window information says 7:15 A.M. instead of 8:00 A.M.

There might have been some other gaps in the record between 5:15 A.M. and 7:15 A.M. If so, the gaps were too short to have a significant impact on the data displayed. MAINVIEW makes adjustments so that you get the most accurate picture possible of the data actually displayed in the view.

**Note:** The time field always contains the end of the last interval for which data was available, and the number of intervals for which data was actually available (normalized over the time frame you requested).

## Determining When Data Was Collected

When viewing summary data (represented by views ending with the letter Z) or most kinds of tabular data, you can easily determine when the data was collected. The **Intvl Time**, **Interval Date**, and **Hr** (Hour) fields contain this information. However, they are excluded from the views by default.

**Note:** Historical data is available for any tabular view whose data is written to historical data sets. For more details, see *MAINVIEW<sup>®</sup> for UNIX System Services User Guide and Reference*.

### To Display These Fields:

- Step 1** On the **COMMAND** line, type **PSOVER** and press **Enter**.
- Step 2** On the **COMMAND** line, type **CUST** and press **Enter**.
- Step 3** On the **COMMAND** line, type **E** and press **Enter**.

The excluded fields are now included, as shown in Figure 4-9 on page 4-16.

**Figure 4-9 PSOVER View with Time, Date, and Hr Fields Included**

```

----- VIEW CUSTOMIZATION - PSOVER -----
OPTION ==> E                                SCROLL ==> PAGE
Options: (that require column selection)      Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Hide excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Show excluded columns >-----
The view is now displaying all the excluded (or hidden) columns. Excluded
columns are marked with highlighted column letters. You can customize an
excluded column (for instance, place a filter on it). You may also make the
column permanently displayable by using the Include option.
If you select E - Hide excluded, the excluded columns will again be hidden.
-----

```

A	B	C	D	E	F	G	H	I	J
C	ProcessId	Interval	Intvl	Hr	Command	Elapsed	Jobname	Status	Multi- Total
-	-----	Date-----	Time-	--	Name	ProcTime	-----	-----	Thread Dly%
	1	06AUGYYYY	13:08	13	BXPINPR	62:13:44	BPXOINIT	ACTIVE	Yes 100.0
	4	06AUGYYYY	13:08	13	DSIMNT	62:11:55	CNMPROCC	ENDED	No 0.00
	5	06AUGYYYY	13:08	13	EZBTCPIP	62:11:56	DC\$TCPIP	ACTIVE	Yes 0.00
	7	06AUGYYYY	13:08	13	EZBTSSL	62:11:50	DC\$TCPIP	ACTIVE	No 0.00
	8	06AUGYYYY	13:08	13	EZBTMCTL	62:11:50	DC\$TCPIP	ACTIVE	No 0.00
	9	06AUGYYYY	13:08	13	EZACFALG	62:11:50	DC\$TCPIP	ACTIVE	No 100.0
	10	06AUGYYYY	13:08	13	EZASASUB	62:11:49	DC\$TCPIP	ACTIVE	No 100.0

Columns B, C, and D display fields that are normally excluded. For more information about them, place your cursor on the desired column and press **PF1** (Help).

**Intvl Time** and **Interval Date** are dynamic fields that are displayed automatically under certain circumstances. For more information on dynamic fields, see Chapter 4, “Comparing Performances with Historical Data,” in *MAINVIEW® for UNIX System Services User Guide and Reference*.

---

---

# Chapter 5 Customizing Views

The view customization feature allows you to perform the following activities:

- Create your own views using MAINVIEW for UNIX System Services views as a base.
- Change the appearance and content of MAINVIEW for UNIX System Services views.

This chapter includes the following topics:

Creating a Partitioned Data Set . . . . .	5-2
Creating Your Own View . . . . .	5-3
Setting Hyperlinks . . . . .	5-9
Including Excluded Fields . . . . .	5-12
Renaming Fields . . . . .	5-15
Moving Fields . . . . .	5-17
Setting Thresholds . . . . .	5-18
Deleting a Customized View . . . . .	5-23
Performing Other Customization Tasks . . . . .	5-24

## Creating a Partitioned Data Set

Before you begin, you need to create a standard partitioned data set called `userid.BBVDEF` to serve as your personal view library. Use a record format of fixed block (FB) and a record length of 80. If your prefix is different from your user ID, name the data set `prefix.userid.BBVDEF`.

If you use the MAINVIEW CLIST to access MAINVIEW for UNIX System Services, the data set you just created will be allocated to your user address space because the `BBVDEF` attribute in the MAINVIEW CLIST procedure has been set to `YES` by your system administrator. If you use another access method, however, you must modify your TSO logon procedure so that it contains the following concatenation:

```
//BBVDEF DD DSN=<userid>.BBVDEF  
//          DD DSN=<hilevel>.SBBVDEF
```

The `<hilevel>.SBBVDEF` library contains customized views for use by everyone at your site. Your personal view library, `<userid>.BBVDEF`, is available only to your user ID.

**Note:** Your MAINVIEW for UNIX System Services product administrator maintains the `<hilevel>.SBBVDEF` library; see your administrator if you want to contribute to the library.

This concatenation ensures that when you type a view on the command line, MAINVIEW for UNIX System Services looks for the view in your personal view library first, and then in the sitewide library, and finally in the MAINVIEW for UNIX System Services view distribution library.

## Creating Your Own View

This section shows you how to create your own view using the PSOVERZ view as a model. By placing a filter on the Process Group column, you can exclude any processes not belonging to that group.

Filters are created by supplying an operator (=, >, <, >=, <=, <>) and a constant in the **Filter** field. The combination of the operator and constant is called a *condition*. An asterisk (\*) can be used as a wildcard character.

### To Create Your Own View Using Filters:

- Step 1** On the **COMMAND** line, type **RESet** and press **Enter** to clear the screen.
- Step 2** On the **COMMAND** line, type **PSOVERZ** and press **Enter**.

The PSOVERZ view is displayed, as shown in Figure 5-1.

**Figure 5-1 Using the PSOVERZ View to Create Your Own View**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ==>
CURR WIN ==> 1      ALT WIN ==>
>W1 =PSOVERZ=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===40
C  ProcessId Command  Elapsed  Jobname  Multi-  Total  Total  Total  Total  Sys Cal
-  -----  Name      ProcTime -----  Thread  Dly%   Run%   Zomb%  Othr%   Rat
1  BPXPINPR  12:48:15  BPXOINIT  Yes     100.0  0.00  0.00  0.00  0.0000
6  inetd     12:48:03  INETD4   No      100.0  0.00  0.00  0.00  0.0000
8  EZBTCPIP  12:47:44  DC$TCPIP Yes      0.00  100.0  0.00  0.00  0.0000
9  EZBTSSL   12:47:39  DC$TCPIP No       0.00  100.0  0.00  0.00  0.0000
10 EZBTMCTL  12:47:38  DC$TCPIP No       0.00  100.0  0.00  0.00  0.0000
11 EZACFALG 12:47:38  DC$TCPIP No      100.0  0.00  0.00  0.00  0.0000
13 EZASASUB 12:47:38  DC$TCPIP No      100.0  0.00  0.00  0.00  0.0321
14 FTPD     12:47:36  DC$FTSRV Yes     100.0  0.00  0.00  0.00  0.0000
15 PORTMAP 12:47:34  DC$PMAP  No     100.0  0.00  0.00  0.00  0.0482
16 GFSAMAIN 12:47:34  DC$NFS   No     100.0  0.00  0.00  0.00  0.0000
17 BBSDTCPL 12:47:33  DC$SVIEW No     100.0  0.00  0.00  0.00  0.0000
18 BPXVCMT  12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
19 GFSCRPCD 12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
20 GFSCRPCD 12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
21 GFSCRPCD 12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
22 GFSCRPCD 12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
23 GFSCRPCD 12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
24 GFSCRPCD 12:47:32  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000

```

The PSOVERZ view provides a summarized view that allows you to analyze the performance and use of resources for the selected processes over multiple intervals.

In this example, the view will be filtered by the Process Group column.

**Step 3** On the **COMMAND** line, type **CUSTom** and press **Enter**.

The **CUSTom** command invokes the **VIEW CUSTOMIZATION** facility, as shown in Figure 5-2.

**Figure 5-2 VIEW CUSTOMIZATION Facility**

```

----- VIEW CUSTOMIZATION - PSOVERZ -----
OPTION ==>
Options: (that require column selection)      Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat      X - Exclude      P - Parameters E - Show excluded
L - Filter      T - Threshold  H - Hyperlink   Z - Summarize  K - Show template

-----
Some options ask you to select a target column. To do so, either type the
option with the column id on the OPTION line (as in: f e to format column E),
or type just the option, move the cursor to the target column and press ENTER.
Your changes are implemented every time you press ENTER. You can save the
modified view definition with any name you choose and specify where thresholds
-----
  A          C          D          E          G          H          I          J          K          L
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
  1 BPXPINPR 12:48:15 BPXOINIT Yes 100.0 0.00 0.00 0.00 0.0000
  6 inetd 12:48:03 INETD4 No 100.0 0.00 0.00 0.00 0.0000
  8 EZBTCPIP 12:47:44 DC$TCPIP Yes 0.00 100.0 0.00 0.00 0.0000
  9 EZBTSSL 12:47:39 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
 10 EZBTMCTL 12:47:38 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
 11 EZACFALG 12:47:38 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0000
 13 EZASASUB 12:47:38 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0321
    
```

- The top half of the display provides a list of customization options and instructions. The filter option is **L**.
- The bottom half of the display contains a working version of the screen. Each column is identified by an alphabetic character at the top of the column.
- If you press **PF11** to scroll to the right, you see the Process Group column, identified by **P**.

**Step 4** On the **COMMAND** line, type **L P** and press **Enter**.

**Step 5** Determine which Process Group you want to be listed.

For this example, 10 is the desired Process Group.

**Step 6** In the **Filter condition** field, type **=10**.

**Step 7** Press **Enter**.

Your results should appear similar to the screen shown in Figure 5-3 on page 5-5.

Figure 5-3 Creating Your Own View

```

----- VIEW CUSTOMIZATION - PSOVERZ -----
OPTION ==> L                                SCROLL ==> CSR
Options: (that require column selection)      Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink    Z - Summarize K - Show template

-----< Filter - column: P element: PRGPGP ----->
Filter condition => P = 10
Parameter position => (optional: 1 to 8; blank means not used positionally)
A condition consists of the column id, an operator, and a value. This value
can be overridden by requesting this view with a keyword parameter (using the
element name as keyword) or a positional parameter (if you assign a position).
-----
  A      L      M      N      O      P      Q      R      S
C ProcessId Interval# Avg# Max# Multi- Process Process Parent
- ----- Sys Calls VNodes Vnodes Thread Group Group(F) Process ID Pr
          10          0 0.00 0 No          10          10          1

```

In this example, the screen is still scrolled to the right, so that you can see the results of the filter. The view at the bottom of the customization screen has been updated and now lists only processes belonging to Process Group 10. The other processes are no longer listed.

**Step 8** To exit view customization, press **PF3**.

The Exit View Customization panel in the middle of the screen prompts you to save your changes. (See Figure 5-4 on page 5-6.)

**Figure 5-4 Exit View Customization Panel**

```

----- VIEW CUSTOMIZATION - PSOVERZ --- FILTERS WERE CHANGED
OPTION ==>                                SCROLL ==> CSR
Options: (that require column selection)   Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink   Z - Summarize K - Show template

-----< Exit View Customization >-----
View: PSOVERZ has been modified. Do you wish to save your changes?

Save changes ==> YES If you reply YES , you will be prompted for a view name.
                    If you reply NO , the view will appear in its original
                    state the next time you request the view by name.

-----
  A          L          M          N          O          P          Q          R          S
C ProcessId Interval# Avg#   Max# Multi- Process Process Parent
- ----- Sys Calls VNodes Vnodes Thread Group Group(F) Process ID Pr
          10          0  0.00   0 No          10          10          1

```

**To Save Your New View:**

**Step 1** To select **YES** in the **Save changes** field, press **Enter**.

The Save View definition panel is displayed in the middle of the screen, as shown in Figure 5-5.

**Figure 5-5 Save View Definition Panel**

```

----- VIEW CUSTOMIZATION - PSOVERZ -----
OPTION ==>                                SCROLL ==> CSR
Options: (that require column selection)   Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink   Z - Summarize K - Show template

-----< Save View definition >-----
View name ==> PSOVERZ This view definition will be saved as a member in
Replace ==> YES (Yes/No) the data set allocated to DD statement BBVDEF .
Description ==> Overview of all processes Dynamic fields ==> YES (Yes/No)
Summary View ==> (for tabular view only)
Threshold Location ==> VIEW (View/Central)
Press ENTER to save the view; enter END (PF3) to end without saving.

-----
  A          L          M          N          O          P          Q          R          S
C ProcessId Interval# Avg#   Max# Multi- Process Process Parent
- ----- Sys Calls VNodes Vnodes Thread Group Group(F) Process ID Pr
          10          0  0.00   0 No          10          10          1

```

To save the view, you need to rename the view to a unique name that you can remember.

- Step 2** In the **View name** field, type a name for this view, such as RSOVERZ.
- Step 3** In the **Description** field, add a description for the view by typing over the existing description.
- Step 4** To return to PSOVERZ, press **Enter**.

The filters for the Process Group are still in effect. When you exit view customization, your changes remain in the original view until you redisplay the view.

- Step 5** To return to the original PSOVERZ view, type **PSOVERZ** on the **COMMAND** line.
- Step 6** Press **Enter**.
- Step 7** To verify that RSOVERZ is now a part of your MAINVIEW for UNIX System Services view set, type **VIEWS R\*** on the **COMMAND** line and press **Enter**.

The VIEWS command lists all views that are part of the MAINVIEW for UNIX System Services view set. By adding R\* after the command, you limit the data to only those views that begin with R. (See Figure 5-6.)

**Figure 5-6 Views Starting with R**

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS  -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =VIEWS=====SJSC=====*****DDMMYYYY==HH:MM:SS==MVUSS====D====2
C View Name Product Area Description
-----
REQSTAT  MVUSS  STATUS  Request status pending & complete
RSOVERZ  MVUSS  User    Overview of all processes

```

In this example, there are two views that begin with R. The Area column of the Views window contains the value *User* for a user-created view and *STATUS* for a MAINVIEW for UNIX System Services-distributed view.

- Step 8** To verify RSOVERZ contains the specified information, position your cursor on the RSOVERZ view name and press **Enter** to hyperlink to the RSOVERZ view.

RSOVERZ is displayed, as shown in Figure 5-7 on page 5-8.

**Figure 5-7 RSOVERZ View**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>Wl =RSOVERZ=====SJSC=====*=====DDMMYYYY==HH:MM:SS===MVUSS===D===1
C  ProcessId Interval#  Avg#  Max# Multi-  Process  Process  Parent
-  ----- Sys Calls VNodes Vnodes Thread  Group  Group(F) Process ID Pr
      10          0  0.00    0 No          10      10      1
    
```

The view looks correct.

**Note:** If you do not create your own library in which to store RSOVERZ, RSOVERZ will be stored in your sitewide library. If you do not allocate a library to your user address space, you will receive an error message.

## Setting Hyperlinks

This section shows you how to create a hyperlink from a particular field in PSOVERZ to RSOVERZ, the view you just created.

### To Set the Hyperlink:

**Step 1** Display PSOVERZ, as shown in Figure 5-8.

**Figure 5-8** Using the PSOVERZ View to Create a Hyperlink

```
DDMMYYYY   HH:MM:SS ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS -----
COMMAND ==>
CURR WIN ==> 1      ALT WIN ==>
>W1 =PSOVERZ=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====40
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- ----- Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
   1 BPXPINPR 12:48:15 BPXOINIT Yes 100.0 0.00 0.00 0.00 0.0000
   6 inetd 12:48:03 INETD4 No 100.0 0.00 0.00 0.00 0.0000
   8 EZBTCPIP 12:47:44 DC$TCPIP Yes 0.00 100.0 0.00 0.00 0.0000
   9 EZBTSSL 12:47:39 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
  10 EZBTMCTL 12:47:38 DC$TCPIP No 89.00 100.0 0.00 0.00 0.0000
  11 EZACFALG 12:47:38 DC$TCPIP No 0.00 0.00 0.00 0.00 0.0000
  13 EZASASUB 12:47:38 DC$TCPIP No 0.00 0.00 0.00 0.00 0.0321
  14 FTPD 12:47:36 DC$FTSRV Yes 0.00 0.00 0.00 0.00 0.0000
  15 PORTMAP 12:47:34 DC$PMAP No 0.00 0.00 0.00 0.00 0.0482
  16 GFSAMAIN 12:47:34 DC$NFS No 0.00 0.00 0.00 0.00 0.0000
  17 BBSDTCP 12:47:33 DC$SVIEW No 0.00 0.00 0.00 0.00 0.0000
  18 BPXVCMT 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
  19 GFSCRPCD 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
  20 GFSCRPCD 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
  21 GFSCRPCD 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
  22 GFSCRPCD 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
  23 GFSCRPCD 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
  24 GFSCRPCD 12:47:32 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
```

In Figure 5-8, you see that job name DC\$TCPIP with a process ID of 10 has a Total Dly% (delay) of 89%.

**Step 2** To enter view customization, type **CUSTOM** on the **COMMAND** line.

The VIEW CUSTOMIZATION - PSOVERZ panel is displayed.

In the example shown in Figure 5-9 on page 5-10, the view is shifted to the right to display the **Total Dly%** field.

Figure 5-9 VIEW CUSTOMIZATION - PSOVERZ

```

----- VIEW CUSTOMIZATION - PSOVERZ -----
OPTION ==>
Options: (that require column selection)      Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat      X - Exclude      P - Parameters E - Show excluded
L - Filter      T - Threshold  H - Hyperlink   Z - Summarize  K - Show template

-----
Some options ask you to select a target column.  To do so, either type the
option with the column id on the OPTION line (as in: f e to format column E),
or type just the option, move the cursor to the target column and press ENTER.
Your changes are implemented every time you press ENTER.  You can save the
modified view definition with any name you choose and specify where thresholds
-----
  A          C          D          E          G          H          I          J          K          L
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
-----
  1 BPXPINPR 13:06:02 BPXOINIT Yes  100.0  0.00  0.00  0.00  0.0000
  6 inetd    13:05:50 INETD4   No   100.0  0.00  0.00  0.00  0.0000
  8 EZBTCPIP 13:05:31 DC$TCPIP Yes    0.00 100.0  0.00  0.00  0.0000
  9 EZBTSSL 13:05:26 DC$TCPIP No     0.00 100.0  0.00  0.00  0.0000
 10 EZBTMCTL 13:05:25 DC$TCPIP No   89.00 100.0  0.00  0.00  0.0000
 11 EZACFALG 13:05:25 DC$TCPIP No    0.00  0.00  0.00  0.00  0.0254
 13 EZASASUB 13:05:25 DC$TCPIP No    0.00  0.00  0.00  0.00  0.0254

```

**Step 3** Determine which alphabetic column identifier represents the **Total Dly%** field.

In this example, the Total Dly% column is G.

**Step 4** In the **OPTION** field, type **H G** and press **Enter**. (H is the Hyperlink Option and G is the column from which you want to create a hyperlink)

The view changes to display new hyperlink fields in the middle of the display, as shown in Figure 5-10 on page 5-11. Hyperlinks consist of two parts: a condition that must be satisfied before the associated command is issued and the command itself.



## Including Excluded Fields

A number of MAINVIEW for UNIX System Services views contain more fields than can fit in one display, and you might want to look at a field that is not currently included in the view. This section shows you how to include an excluded field.

### To Include a Field:

- Step 1** Display the PSUSEZ view, as shown in Figure 5-11.

**Figure 5-11 PSUSEZ View**

```

DDMMYYYY  HH:MM:SS  ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ===>                                     SCROLL ===> PAGE
CURR WIN  ===> 1          ALT WIN  ===>
>W1 =PSUSEZ=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===41
C  ProcessId Command  Elapsed  Jobname      Running %      Sys Call Interval#
-  -----  Name      ProcTime  -----      0...50...100      Rate Sys Calls
      8  EZBTCPIP  13:21:50  DC$TCPIP  100.0          0.0000          0
      9  EZBTSSL  13:21:45  DC$TCPIP  100.0          0.0000          0
     10  EZBTMCTL 13:21:44  DC$TCPIP  100.0          0.0000          0
     27  TCPMOMVS 13:21:38  XTSTIPAS  100.0          0.9971          312
     30  BBM9SZ20 13:21:25  DC$PAS    100.0          3.1542          987
     63  CSQXJST  05:45:40  CSQACHIN  100.0          0.0000          0
     64  CSQXDISP 05:45:40  CSQACHIN  100.0          0.0000          0
     65  CSQXDISP 05:45:40  CSQACHIN  100.0          0.0000          0
     66  CSQXDISP 05:45:40  CSQACHIN  100.0          0.0000          0
     67  CSQXDISP 05:45:40  CSQACHIN  100.0          0.0000          0
     68  CSQXDISP 05:45:40  CSQACHIN  100.0          0.0000          0
     70  CSQXTNSV 05:45:40  CSQACHIN  100.0          0.0000          0
     76  TCPMHFSS 03:23:17  XTSTJPAS  100.0          0.0064          2
    16777218 GFSCMAIN 13:21:38  DC$NFSC   100.0          0.0000          0
    16777219 BPXVCLNY 13:21:39  DC$NFSC   100.0          0.0000          0
    16777223 DSIMNT   13:21:54  CNMPROCC  100.0          0.0000          0
    16777289 BBM9SZ20 04:33:39  ENGKPAS   100.0          3.5218          1102
    16777290 BBM9SZ20 03:38:59  CANDKPAS  100.0          3.4195          1070

```

- Step 2** To invoke the view customization facility, type **CUSTom** on the **COMMAND** line.
- Step 3** Press **Enter**.
- Step 4** To show the fields that have been excluded for PSUSEZ, type **E** in the **OPTION** field and press **Enter**.
- Step 5** The excluded fields are now displayed, as shown in Figure 5-12 on page 5-13.

Figure 5-12 PSUSEZ View Displaying Excluded Fields

```

----- VIEW CUSTOMIZATION - PSUSEZ -----
OPTION ==> E                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Hide excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Show excluded columns >-----
The view is now displaying all the excluded (or hidden) columns.  Excluded
columns are marked with highlighted column letters.  You can customize an
excluded column (for instance, place a filter on it).  You may also make the
column permanently displayable by using the Include option.
If you select E - Hide excluded, the excluded columns will again be hidden.
-----
  A      B      C      D      E      F      G      H      I
C ProcessId Record Command Elapsed Jobname Status Running % Sys
- - - - - Count Name ProcTime -----
  8      1  EZBTCPIP 13:21:50 DC$TCPIP ACTIVE 100.0  0.
  9      1  EZBTSSL 13:21:45 DC$TCPIP ACTIVE 100.0  0.
 10      1  EZBTMCTL 13:21:44 DC$TCPIP ACTIVE 100.0  0.
 27      1  TCPMOMVS 13:21:38 XTSTIPAS ACTIVE 100.0  0.
 30      1  BBM9SZ20 13:21:25 DC$PAS  ACTIVE 100.0  3.
 63      1  CSQXJST  05:45:40 CSQACHIN ACTIVE 100.0  0.
 64      1  CSQXDISP 05:45:40 CSQACHIN ACTIVE 100.0  0.

```

The column headers of the excluded fields appear in a different color. If the number of columns is too large, there are three separate naming schemes: A-Z, AA-ZZ, and AAA-ZZZ.

**Step 6** Press **PF11** multiple times to scroll to the right and see all the fields. Press **PF10** multiple times to return to the start of the fields.

In this example, you will add the **Status** field to PSUSEZ so that the process status is displayed.

**Step 7** In the **OPTION** field, type **I n** and press **Enter**

where

**I** is the command to include fields

**n** is the alphabetic column identifier for the **Status** field

In this example, F is the column identifier.

**Step 8** To hide the remaining excluded fields, type **E** in the **OPTION** field.

Your screen should now look like Figure 5-13 on page 5-14.

Figure 5-13 Including the Status Field

```

----- VIEW CUSTOMIZATION - PSUSEZ -----
OPTION ==>                                SCROLL ==> CSR
Options: (that require column selection)   Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Hide excluded columns >-----
The view has now removed all the excluded (or hidden) columns from the display.
An excluded column that has a filter associated with it will still be used in
the selection of data to be displayed.

If you select E - Show excluded, the excluded columns will again be displayed.
-----
  A      C      D      E      F      G      H      I      J
C ProcessId Command Elapsed Jobname Status Running % Sys Call In
- - - - - Name ProcTime - - - - - - - - - 0...50...100 Rate Sy
  8 EZBTCPIP 13:21:50 DC$TCPIP ACTIVE 100.0 0.0000
  9 EZBTSSL 13:21:45 DC$TCPIP ACTIVE 100.0 0.0000
 10 EZBTMCTL 13:21:44 DC$TCPIP ACTIVE 100.0 0.0000
 27 TCPMOMVS 13:21:38 XT$TIPAS ACTIVE 100.0 0.9971
 30 BBM9SZ20 13:21:25 DC$PAS  ACTIVE 100.0 3.1542
 63 CSQXJST 05:45:40 CSQACHIN ACTIVE 100.0 0.0000
 64 CSQXDISP 05:45:40 CSQACHIN ACTIVE 100.0 0.0000

```

**Step 9** Do not press **PF3** because you will continue to modify PSUSEZ in the next section, “Renaming Fields” on page 5-15.

## Renaming Fields

This section describes how to change the name of a field. The command to change the field name or appearance is **F** (Format).

To change the **Status** field to the **Active Status** field in the PSUSEZ view, follow these steps:

**Step 1** In the **OPTION** field, overtype E with **F n**

where *n* is the column identifier for the **Status** field. In this example, F is the column identifier.

**Step 2** Press **Enter**.

Your screen looks like Figure 5-14.

**Figure 5-14 Renaming Fields**

```

----- VIEW CUSTOMIZATION - PSUSEZ -----
OPTION ==> F                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Format - column: F element: PRGFLGC >-----
Data type: Character      Display Mode => 1 ( 1 as is 2 as graph 3 as hex )
Width => 6                Graph range (for 2): Low => 0 High => 0
Decimals => 0 (for numeric data) Display zero values => N (Yes/No)
Heading1 => Status      Summarization type => X (A/S/M/X/C/L/P)
Heading2 => -----      Condition (for C) =>

-----
A      C      D      E      F      G      H      I      J
C ProcessId Command Elapsed Jobname Status Running % Sys Call In
- ----- Name ProcTime ----- ----- 0....50...100 Rate Sy
      8 EZBTCPIP 13:21:50 DC$TCPIP ACTIVE 100.0 0.0000
      9 EZBTSSL 13:21:45 DC$TCPIP ACTIVE 100.0 0.0000
     10 EZBTMCTL 13:21:44 DC$TCPIP ACTIVE 100.0 0.0000
     27 TCPMOMVS 13:21:38 XTSTIPAS ACTIVE 100.0 0.9971
     30 BBM9SZ20 13:21:25 DC$PAS  ACTIVE 100.0 3.1542
     63 CSQXJST 05:45:40 CSQACHIN ACTIVE 100.0 0.0000
     64 CSQXDISP 05:45:40 CSQACHIN ACTIVE 100.0 0.0000

```

The first part of the field's current name, **Status**, appears in **Heading1**, and dashes appear in **Heading2**.

**Step 3** In the **Format** area, type **Active** in **Heading1** and type **Status** directly over the dashes in **Heading2**.

**Step 4** Press **Enter**.

The Status column at the bottom of the screen should immediately change to *Active Status*, as shown in Figure 5-15.

**Figure 5-15**     **Displaying a Field with a New Name**

```

----- VIEW CUSTOMIZATION - PSUSEZ -----
OPTION ==> F                                SCROLL ==> CSR
Options: (that require column selection)      Other options:
F - Format   M - Move       I - Include       G - Graph   S - Save view
O - Order   R - Repeat     X - Exclude    P - Parameters E - Show excluded
L - Filter  T - Threshold  H - Hyperlink Z - Summarize K - Show template

-----< Format - column: F element: PRGFLGC >-----
Data type: Character      Display Mode => 1 ( 1 as is 2 as graph 3 as hex )
Width => 6                Graph range (for 2): Low => 0      High => 0
Decimals => 0 (for numeric data)  Display zero values => N (Yes/No)
Heading1 => Active          Summarization type => L (A/S/M/X/C/L/P)
Heading2 => Status         Condition (for C) =>

-----
  A          C          D          E          F          G          H          I          J
C ProcessId Command Elapsed Jobname Active      Running %      Sys Call In
- - - - - Name      ProcTime ----- Status      0...50...100      Rate Sy
      8 EZBTCPIP 13:21:50 DC$TCPIP ACTIVE 100.0
      9 EZBTSSL 13:21:45 DC$TCPIP ACTIVE 100.0
     10 EZBTMCTL 13:21:44 DC$TCPIP ACTIVE 100.0
     27 TCPMOMVS 13:21:38 XTSTIPAS ACTIVE 100.0
     30 BBM9SZ20 13:21:25 DC$PAS  ACTIVE 100.0
     63 CSQXJST 05:45:40 CSQACHIN ACTIVE 100.0
     64 CSQXDISP 05:45:40 CSQACHIN ACTIVE 100.0

```

**Step 5**     Do not press **PF3**, because you will continue to modify the screen in “Moving Fields” on page 5-17.

# Moving Fields

This section explains how to move fields inside a view. The command to move fields is **M**.

To move the **Active Status** field so that it follows the **Process ID** field in the PSUSEZ view, follow these steps:

**Step 1** In the **OPTION** field, type **M <n1> <n2>**

where *n1* is the column identifier of the field that you want to move (**Active Status**) and *n2* is the column identifier of the field preceding the new location (**ProcessId**). For this example, *n1* is F and *n2* is A.

**Step 2** Press **Enter** to see a screen similar to Figure 5-16.

**Figure 5-16 Moving a Field**

```

----- VIEW CUSTOMIZATION - PSUSEZ -----
OPTION ==> M                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink   Z - Summarize  K - Show template

-----< Move - column: B element: PRGFLGC >-----
The column has been moved. Note that the affected columns have been
assigned new column identifiers.

-----
  A      B      D      E      F      G      H      I      J
C ProcessId Active Command Elapsed Jobname      Running %      Sys Call In
- - - - - Status Name      ProcTime ----- 0...50...100      Rate Sy
      8 ACTIVE EZBTCPIP 13:21:50 DC$TCPIP 100.0      0.0000
      9 ACTIVE EZBTSSL 13:21:45 DC$TCPIP 100.0      0.0000
     10 ACTIVE EZBTMCTL 13:21:44 DC$TCPIP 100.0      0.0000
     27 ACTIVE TCPMOMVS 13:21:38 XTSTIPAS 100.0      0.9971
     30 ACTIVE BBM9SZ20 13:21:25 DC$PAS 100.0      3.1542
     63 ACTIVE CSQXJST 05:45:40 CSQACHIN 100.0      0.0000
     64 ACTIVE CSQXDISP 05:45:40 CSQACHIN 100.0      0.0000

```

The **Active Status** column now follows the **ProcessID** column. It also has a new column identifier of **B**.

By using the **M** command, you determined that whichever column was specified by *n1* should be placed to the right of the column specified by *n2*.

**Step 3** To exit view customization, press **PF3**.

**Step 4** To save your changes, press **Enter** to accept the **Yes** in the **Save Changes** field in the middle of the panel.

**Step 5** On the Save View definition panel, modify the View name and press **Enter**.

## Setting Thresholds

All views for MAINVIEW for UNIX System Services use centralized thresholds. When saving a customized view, BBI-3 automatically saves the default values, and you must override this command to save the customized view.

This section shows you how to set thresholds for PSDELAYZ's Total Delay% in numeric form.

In this example, you will specify thresholds for the Total Delay% column so that

- values between 1 and 50 percent appear in green
- values between 50 and 80 percent appear yellow
- values between 80 and 100 percent appear red

**Note:** If you are using a 3270 emulator package on a PC, the package might or might not enable all colors.

The Total Delay% column specifies how much of a delay a particular process is experiencing. The higher the percentage is, the longer the delay. If the delay is too high, there could be a problem with a process.

### To Set the Thresholds for PSDELAYZ:

**Step 1** Display PSDELAYZ.

**Step 2** On the **COMMAND** line, type **CUSTom** and press **Enter**.

Your screen should look similar to Figure 5-17 on page 5-19.

Figure 5-17 Setting Thresholds

```

----- VIEW CUSTOMIZATION - PSDELAYZ -----
OPTION ==>                                SCROLL ==> PAGE
Options: (that require column selection)   Other options:
F - Format      M - Move      I - Include    G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template
-----

Some options ask you to select a target column.  To do so, either type the
option with the column id on the OPTION line (as in: f e to format column E),
or type just the option, move the cursor to the target column and press ENTER.
Your changes are implemented every time you press ENTER.  You can save the
modified view definition with any name you choose and specify where thresholds
-----

  A      C      D      E      G      H      I      K      M
C ProcessId Command Elapsed Jobname      Total Delay % Total Total %Delay
- - - - - Name ProcTime ----- 0...50...100 Zomb% Othr% MsgRcv
  1 BPXPINPR 28:35:50 BPXOINIT 100.00
  6 inetd    28:35:40 INETD4   100.00
 17 EZACFALG 28:35:16 DC$TCPIP 100.00
 18 EZASASUB 28:35:15 DC$TCPIP 100.00
 20 BBSDTCPL 28:35:13 DC$SVIEW 100.00
 21 FTPD     28:35:13 DC$FTSRV 100.00
 22 PORTMAP  28:35:11 DC$PMAP  100.00
 24 GFSAMAIN 28:35:10 DC$NFS   100.00
 92 SMLoad   01:40:36 MQMRK300 100.00
 93 CSQXRCTL 01:40:29 CSQ1CHIN 100.00
16777235 BBW9IC00 28:35:01 XTSTJMX  100.00
33554462 IOAXTSRV 00:54:11 DC$OSASR 100.00
  8 GFSCRPCD 28:35:16 DC$NFSC  0.00
  9 GFSCRPCD 28:35:16 DC$NFSC  0.00
 10 GFSCRPCD 28:35:16 DC$NFSC  0.00
 11 GFSCRPCD 28:35:16 DC$NFSC  0.00
 12 GFSCRPCD 28:35:16 DC$NFSC  0.00
 13 GFSCRPCD 28:35:16 DC$NFSC  0.00
 14 GFSCRPCD 28:35:16 DC$NFSC  0.00
 0.00 100.0 100.00

```

Pay particular attention to the Total Delay% column.

**Note:** The alphabetic column headers might be different for all or some of your field names. Locate the alphabetic column header character identifying the field used in each command that follows in this section. Substitute the alphabetic character that matches each field name used in each command.

The command for establishing thresholds is **T**.

**Step 3** In the **OPTION** field, type **T <n>** and press **Enter**

where *n* is the alphabetic column identifier for the **Total Delay%** field for your system. In this example, **G** is the column identifier. Your screen should look like Figure 5-18 on page 5-20.

Figure 5-18 Completing the Threshold Fields

```

----- VIEW CUSTOMIZATION - PSDELAYZ -----
OPTION ==> T                                SCROLL ==> PAGE
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Threshold - column: G  element: PRIDLYP  >-----
Condition:          Attr: Sub:  Inherit from => F  0: GREEN  5: GREEN
1st =>              =>  =>              1: BLUE   6: BLUE
2nd =>              =>  =>              2: YELLOW 7: YELLOW
3rd =>              =>  =>              3: PINK   8: PINK
4th =>              =>  =>              4: RED    9: RED
5th =>              =>  =>
6th =>              =>  =>
7th =>              =>  =>
8th =>              =>  =>
-----
      A          C          D          E          G          H          I          K          M
C ProcessId Command  Elapsed  Jobname      Total Delay % Total Total %Delay
- - - - - Name      ProcTime  - - - - -  0...50...100 Zomb%  Othr%  MsgRcv
      1 BPXPINPR  28:35:50  BPXOINIT  100.00      0.00  0.00  0.00
      6 inetd     28:35:40  INETD4    100.00      0.00  0.00  0.00
     17 EZACFALG  28:35:16  DC$TCPIP  100.00      0.00  0.00  0.00
     18 EZASASUB  28:35:15  DC$TCPIP  100.00      0.00  0.00  0.00
     20 BBSDTCPL  28:35:13  DC$SVIEW  100.00      0.00  0.00  0.00
     21 FTPD     28:35:13  DC$FTSRV  100.00      0.00  0.00  0.00
     22 PORTMAP  28:35:11  DC$PMAP   100.00      0.00  0.00  0.00
     24 GFSAMAIN  28:35:10  DC$NFS    100.00      0.00  0.00  0.00
     92 SMLOAD   01:40:36  MQMRK300  100.00      0.00  0.00  0.00
     93 CSQXRCTL  01:40:29  CSQ1CHIN  100.00      0.00  0.00  0.00
16777235 BBW9IC00  28:35:01  XTSTJMKP  100.00      0.00  0.00  0.00
33554462 IOAXTSRV  00:54:11  DC$OSASR  100.00      0.00  0.00  0.00
      8 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00
      9 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00
     10 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00
     11 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00
     12 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00
     13 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00
     14 GFSCRPCD  28:35:16  DC$NFSC   0.00      0.00 100.0 100.00

```

In the Threshold section, the numbers on the right represent the colors that you can specify in the **Attr** fields (on the left).

Remember, you want

- values between 1 and 50 percent to appear in green
- values between 50 and 80 percent to appear yellow
- values between 80 and 100 percent to appear red

Two conditions cannot be specified in the same **Condition** field because threshold conditions are satisfied in descending order. That is, **>=10** and **<50** are entered in two separate fields, rather than combining them in a single field.

Add all three thresholds at once, using these steps:

- Step 1** In the first **Condition** field, type **>= 80**.
- Step 2** In the corresponding **Attr** field, type **4**.
- Step 3** In the second **Condition** field, type **>=50**.
- Step 4** In the corresponding **Attr** field, type **2**.
- Step 5** In the third **Condition** field, type **>=0**.
- Step 6** In the corresponding **Attr** field, type **0**.
- Step 7** Press **Enter**.

Moving down the **Condition** field, MAINVIEW for UNIX System Services first changes any values equal to or greater than 80 to red, changes all values between 50 and 80 to yellow, and then finally changes values below 50 to green.

Figure 5-19 Adding Three Thresholds Simultaneously

```

----- VIEW CUSTOMIZATION - PSDELAYZ -----
OPTION ==> T                                SCROLL ==> PAGE
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Threshold - column: G  element: PRIDLYP  >-----
Condition:          Attr: Sub:  Inherit from =>  0: GREEN  5: GREEN
1st => H >= 80      => 4 =>      1: BLUE   6: BLUE
2nd => H >= 50      => 2 =>      2: YELLOW 7: YELLOW
3rd => H >= 0       => 0 =>      3: PINK   8: PINK
4th =>              => =>      4: RED    9: RED
5th =>              => =>
6th =>              => =>
7th =>              => =>
8th =>              => =>
-----
  A          C          D          E          G          H          I          K          M
C ProcessId Command  Elapsed  Jobname          Total Delay % Total Total %Delay
- - - - - Name      ProcTime  - - - - - 0...50...100 Zomb%  Othr%  MsgRcv
  1 BPXPINPR  28:35:50 BPXOINIT 100.00          0.00  0.00  0.00
  6 inetd    28:35:40 INETD4   100.00          0.00  0.00  0.00
 17 EZACFALG 28:35:16 DC$TCPIP 100.00          0.00  0.00  0.00
 18 EZASASUB 28:35:15 DC$TCPIP 100.00          0.00  0.00  0.00
 20 BBSDTCPL 28:35:13 DC$SVIEW 100.00          0.00  0.00  0.00
 21 FTPD     28:35:13 DC$FTSRV 100.00          0.00  0.00  0.00
 22 PORTMAP  28:35:11 DC$PMAP  100.00          0.00  0.00  0.00
 24 GFSAMAIN 28:35:10 DC$NFS   100.00          0.00  0.00  0.00
 92 SMLOAD   01:40:36 MQMRK300 100.00          0.00  0.00  0.00
 93 CSQXRCTL 01:40:29 CSQ1CHIN 100.00          0.00  0.00  0.00
16777235 BBW9IC00 28:35:01 XTSTJMXP 100.00          0.00  0.00  0.00
33554462 IOAXTSRV 00:54:11 DC$OSASR 100.00          0.00  0.00  0.00
   8 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00
   9 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00
  10 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00
  11 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00
  12 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00
  13 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00
  14 GFSCRPCD 28:35:16 DC$NFSC   0.00          0.00 100.0 100.00

```

The values in the Total Delay% column immediately assume the thresholds you set and change color. This feature makes it especially easy to locate any trouble areas.

**Step 8** To exit view customization, press **PF3**.

You can save your changes if you want. By default, the **Threshold Location** field is set to **VIEW**, as shown in Figure 5-20 on page 5-23, and the thresholds are saved only for your view. To save the thresholds for all users, type **CENTRAL** in the **Threshold Location** field.

Figure 5-20 Threshold Location

```

----- VIEW CUSTOMIZATION - PSDELAYZ -----
OPTION ==>
Options: (that require column selection)      Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat      X - Exclude      P - Parameters E - Show excluded
L - Filter      T - Threshold H - Hyperlink      Z - Summarize K - Show template

-----< Save View definition >-----
View name ==> PSDELAYZ      This view definition will be saved as a member in
Replace ==> YES (Yes/No)   the data set allocated to DD statement BBVDEF .
Description ==> Delays experienced by processe Dynamic fields ==> YES (Yes/No)
Summary View ==>          (for tabular view only)
Threshold Location ==> CENTRAL (View/Central)
Press ENTER to save the view; enter END (PF3) to end without saving.

```

**Step 9** Press **Enter** to save the view. Press **PF3** to end without saving the view.

## Deleting a Customized View

To delete a view that you have customized, follow these steps:

- Step 1** Access the VIEWS view.
- Step 2** In the line command field to the left of your view name, type **D**.
- Step 3** Press **Enter**.  
  
A confirmation panel is displayed.
- Step 4** On the **COMMAND** line of the confirmation panel, type **END**.

## Performing Other Customization Tasks

In addition to the tasks already described, view customization also allows you to perform the customization tasks listed in the following table.

Activity	Use Option
Change a column width, change a column header, or move a decimal point.	F (Format)
Alter the full-screen graphical display of the view.	G (Graph)
Sort rows of data by ascending or descending values.	O (Order)
Find out which fields have been specified as <i>positional parameters</i> for a view.	P (Parameters)

If you need help in using these or any other options, press **PF1** while in view customization or refer to the *MAINVIEW<sup>®</sup> for UNIX System Services User Guide and Reference*.

---

---

# Chapter 6 Summarized Views

MAINVIEW for UNIX System Services provides several summarized views to present a general overview of certain activities or information. However, you might encounter a situation in which you want to summarize additional information that does not already appear in a summarized view.

Sometimes it is hard to grasp the significance of the view's information when there are many rows of data to examine. To make things easier, MAINVIEW for UNIX System Services allows you to create your own summarized views by compressing several rows of data into a single line that represents the data for all the compressed rows.

This chapter includes the following topics:

Creating a Summary View .....	6-2
Formatting Summarized Data .....	6-4
Saving Formatted Data .....	6-7
Expanding a Summary View .....	6-8

# Creating a Summary View

Summarized views are created from tabular views. As an example, we will summarize a field in PSOVER.

## To Create a Summary View:

**Step 1** Display PSOVER.

**Step 2** On the **COMMAND** line, type **CUSTom** and press **Enter**.

Your screen looks like Figure 6-1, although your column identifiers might be different.

**Figure 6-1 VIEW CUSTOMIZATION for PSOVER**

```

----- VIEW CUSTOMIZATION - PSOVER -----
OPTION ==>
Options: (that require column selection)      Other options:      SCROLL ==> CSR
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat      X - Exclude      P - Parameters E - Show excluded
L - Filter      T - Threshold  H - Hyperlink   Z - Summarize  K - Show template

-----
Some options ask you to select a target column. To do so, either type the
option with the column id on the OPTION line (as in: f e to format column E),
or type just the option, move the cursor to the target column and press ENTER.
Your changes are implemented every time you press ENTER. You can save the
modified view definition with any name you choose and specify where thresholds
-----
  A      E      F      G      I      J      K      L      M      N
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
  1 BPXPINPR 07:42:51 BPXOINIT Yes 100.0 0.00 0.00 0.00 0.0000
  6 inetd 07:42:40 INETD4 No 100.0 0.00 0.00 0.00 0.0000
  8 EZBTCPIP 07:42:22 DC$TCPIP Yes 0.00 100.0 0.00 0.00 0.0000
  9 EZBTSSL 07:42:17 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
 11 EZACFALG 07:42:17 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0444
 12 GFSCRPCD 07:42:16 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 13 GFSCRPCD 07:42:16 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000

```

Given the number of rows in PSOVER, it is not hard to see how it might be useful to compress the display into just a few lines.

To determine a good candidate for summarization, look at the information contained in each row. You want to select a field that has the same value for multiple rows. For example, a number of processes have the same jobname. Therefore, you could summarize a number of rows based on the jobname.

Begin creating your summary view by using Option Z - Summarize.

**Step 3** In the **OPTION** field, type **Z** and press **Enter**.

The summarize input fields on PSOVER are displayed, as shown in Figure 6-2 on page 6-3.

**Figure 6-2 Selecting the Summarize Option**

```

----- VIEW CUSTOMIZATION - PSOVER -----
OPTION ==> Z                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include    G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude  P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink Z - Summarize K - Show template

-----< Summarize - Specify columns for summarization >-----
If you want to summarize rows of data, specify at least one column to group by:
Group by 1=> To further customize a summarized view:
          2=> Use option X to exclude a column from the summarized view.
          3=> Use option F to modify the type of summarization for a column
          4=> ( S sum, A avg, M min, X max, C count, L any, P percent)
-----

```

C	A	E	F	G	I	J	K	L	M	N
ProcessId	Command	Elapsed	Jobname	Multi-	Total	Total	Total	Total	Sys	Cal
Name	ProcTime	Thread	Dly%	Run%	Zomb%	Othr%	Rat			
1	BPXPINPR	07:42:51	BPXOINIT	Yes	100.0	0.00	0.00	0.00	0.0000	
6	inetd	07:42:40	INETD4	No	100.0	0.00	0.00	0.00	0.0000	
8	EZBTCPIP	07:42:22	DC\$TCPIP	Yes	0.00	100.0	0.00	0.00	0.0000	
9	EZBTSSSL	07:42:17	DC\$TCPIP	No	0.00	100.0	0.00	0.00	0.0000	
11	EZACFALG	07:42:17	DC\$TCPIP	No	100.0	0.00	0.00	0.00	0.0444	
12	GFSCRPCD	07:42:16	DC\$NFSC	No	0.00	0.00	0.00	100.0	0.0000	

**Step 4** To summarize the data by the **Jobname** field, type **G** in the **Group by 1** field and press **Enter**, where G is the alphabetic column identifier for the **Jobname** field on your system.

PSOVER is now summarized by the **Jobname** field, which is now column A.

**Figure 6-3 Summarizing PSOVER**

```

----- VIEW CUSTOMIZATION - PSOVER -----
OPTION ==> Z                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include    G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude  P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink Z - Summarize K - Show template

-----< Summarize - Specify columns for summarization >-----
If you want to summarize rows of data, specify at least one column to group by:
Group by 1=> A To further customize a summarized view:
          2=> Use option X to exclude a column from the summarized view.
          3=> Use option F to modify the type of summarization for a column
          4=> ( S sum, A avg, M min, X max, C count, L any, P percent)
-----

```

C	A	B	F	G	I	J	K	L	M	N
Jobname	ProcessId	Command	Elapsed	Multi-	Total	Total	Total	Total	Sys	Cal
Name	ProcTime	Thread	Dly%	Run%	Zomb%	Othr%	Rat			
AOPD	33554436	aopd	07:42:40	Yes	0.00	0.00	0.00	100.0	0.0000	
BPXOINIT	1	BPXPINPR	07:42:51	Yes	100.0	0.00	0.00	0.00	0.0000	
CMQ30PAS	31	SMLoad	04:43:00	No	100.0	0.00	0.00	0.00	0.0519	
DC\$NFSC	9151221	*****	07:42:28	No	0.00	18.18	0.00	81.82	0.0000	
EZACFALG	11	DC\$TCPIP	07:42:17	No	100.0	0.00	0.00	0.00	0.0444	
EZBTCPIP	8	DC\$TCPIP	07:42:22	Yes	0.00	100.0	0.00	0.00	0.0000	
EZBTSSSL	9	DC\$TCPIP	07:42:17	No	0.00	100.0	0.00	0.00	0.0000	

By summarizing the view, you can better pinpoint areas of delay or excessive system calls because you do not have to scroll through rows and rows of data to locate a problem.

**Step 5** If you would like to save your changes, press **PF3** and follow the prompts.

# Formatting Summarized Data

To make the information more usable, MAINVIEW for UNIX System Services allows you to specify how the data on a summary view is treated, such as averaging the values, summing the data, or expanding the field.

**Step 1** Display PSOVERZ.

**Figure 6-4** Formatting PSOVERZ Data

```
DDMMYYYY   HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>
CURR WIN ==> 1      ALT WIN ==>
>W1 =PSOVERZ=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D====32
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime - - - - - Thread Dly% Run% Zomb% Othr% Rat
1 BPXPINPR 07:51:45 BPXOINIT YES 100.0 0.00 0.00 0.00 0.0000
6 inetd 07:51:34 INETD4 Yes 100.0 0.00 0.00 0.00 0.0000
8 EZBTCPIP 07:51:16 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
9 EZBTSSL 07:51:11 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
11 EZACFALG 07:51:11 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0722
12 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
13 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
14 EZASASUB 07:51:10 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0240
15 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
16 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
17 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
18 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
19 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
20 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
22 FTPD 07:51:09 DC$FTSRV Yes 100.0 0.00 0.00 0.00 0.0000
23 BBSDTCPL 07:51:08 DC$SVIEW Yes 100.0 0.00 0.00 0.00 0.0000
24 PORTMAP 07:51:07 DC$PMAP NO 100.0 0.00 0.00 0.00 0.0000
25 GFSAMAIN 07:51:07 DC$NFS NO 100.0 0.00 0.00 0.00 0.0000
26 TCPMHFSS 07:51:05 XTSTJPAS NO 0.00 100.0 0.00 0.00 0.0240
28 BBM9SZ20 07:50:54 XTSTKPAS NO 0.00 100.0 0.00 0.00 2.3846
29 BBW9IC00 07:50:51 XTSTJMPX NO 100.0 0.00 0.00 0.00 0.0000
30 ECACMGRS 07:50:42 CTSGATE NO 100.0 0.00 0.00 0.00 0.0000
31 SMLOAD 04:51:54 CMQ30PAS NO 100.0 0.00 0.00 0.00 0.0843
16777218 BPXVCLNY 07:51:22 DC$NFSC NO 0.00 100.0 0.00 0.00 0.0000
16777219 GFSCMAIN 07:51:22 DC$NFSC NO 0.00 100.0 0.00 0.00 0.0000
16777223 DSIMNT 07:51:20 CNMPROCC NO 0.00 100.0 0.00 0.00 0.0000
```

By looking at PSOVERZ, you can see that the values displayed in the Sys Call Rate column may have been truncated. You can expand the Sys Call Rate column to see the rest of the numbers.

**Step 2** On the COMMAND line, type CUST.

The VIEW CUSTOMIZATION panel is displayed.

**Step 3** In the Option field, type F K and press Enter, where K is the alphabetic column identifier for the Sys Call Rate column.

Your panel should now be divided into three sections, as shown in Figure 6-5.

**Figure 6-5 Formatting a Field**

```

OPTION ==> F                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat     X - Exclude     P - Parameters E - Show excluded
L - Filter     T - Threshold  H - Hyperlink  Z - Summarize  K - Show template

-----< Format - column: K element: PRINSCR >-----
Data type: Numeric      Display Mode => 1 ( 1 as is 2 as graph 3 as hex )
Width => 9              Graph range (for 2): Low => 0      High => 0
Decimals => 5 (for numeric data)      Display zero values => Y (Yes/No)
Heading1 => Sys Call      Summarization type => A (A/S/M/X/C/L/P)
Heading2 => Rate          Condition (for C) =>

-----
  A      C      D      E      G      H      I      J      K      L
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
  1 BXPINPR 07:51:45 BPXOINIT Yes 100.0 0.00 0.00 0.00 0.0000
  6 inetd 07:51:34 INETD4 No 100.0 0.00 0.00 0.00 0.0000
  8 EZBTCPIP 07:51:16 DC$TCPIP Yes 0.00 100.0 0.00 0.00 0.0000
  9 EZBTSSL 07:51:11 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
 11 EZACFALG 07:51:11 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0722
 12 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 13 GFSCRPCD 07:51:10 DC$NFSC Yes 0.00 0.00 0.00 0.00 100.0 0.0000
 14 EZASASUB 07:51:10 DC$TCPIP Yes 100.0 0.00 0.00 0.00 0.0240
 15 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 16 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 17 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 18 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 19 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 20 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 0.00 100.0 0.0000
 22 FTPD 07:51:09 DC$FTSRV Yes 100.0 0.00 0.00 0.00 0.0000
    
```

Notice that the width for the Sys Call Rate column is set to 9 with 5 decimal places.

For a complete list of formatting options, place your cursor on the **Summarization type** field and press **PF1**. To return to the main panel, press **PF3**.

**Step 4** To expand the Sys Call Rate column, for example, change the **Width** field to 11 and the **Decimals** field to 7 and press **Enter**.

The data displayed in the **Sys Call Rate** field is now 11 characters wide with 7 decimal places, as shown in Figure 6-6 on page 6-6. (You will have to scroll the screen to the right to see the effect of this change.)

**Figure 6-6 Displaying an Expanded Field**

```

----- VIEW CUSTOMIZATION - PISOVERZ -----
OPTION ==> F                                SCROLL ==> CSR
Options: (that require column selection)    Other options:
F - Format      M - Move      I - Include      G - Graph      S - Save view
O - Order      R - Repeat    X - Exclude    P - Parameters E - Show excluded
L - Filter     T - Threshold H - Hyperlink    Z - Summarize K - Show template

-----< Format - column: K element: PRINSCR >-----
Data type: Numeric      Display Mode => 1 ( 1 as is 2 as graph 3 as hex )
Width => 11             Graph range (for 2): Low => 0      High => 0
Decimals => 7 (for numeric data)      Display zero values => Y (Yes/No)
Heading1 => Sys Call      Summarization type => A (A/S/M/X/C/L/P)
Heading2 => Rate          Condition (for C) =>

-----
  A      C      D      E      G      H      I      J      K      L
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- - - - - Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
  1 BPXPINPR 07:51:45 BPXOINIT Yes 100.0 0.00 0.00 0.00 0.0000
  6 inetd 07:51:34 INETD4 No 100.0 0.00 0.00 0.00 0.0000
  8 EZBTCPIP 07:51:16 DC$TCPIP Yes 0.00 100.0 0.00 0.00 0.0000
  9 EZBTSSL 07:51:11 DC$TCPIP No 0.00 100.0 0.00 0.00 0.0000
 11 EZACFALG 07:51:11 DC$TCPIP No 100.0 0.00 0.00 0.00 0.0722
 12 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 13 GFSCRPCD 07:51:10 DC$NFSC Yes 0.00 0.00 0.00 100.0 0.0000
 14 EZASASUB 07:51:10 DC$TCPIP Yes 100.0 0.00 0.00 0.00 0.0240
 15 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 16 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 17 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 18 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 19 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 20 GFSCRPCD 07:51:10 DC$NFSC No 0.00 0.00 0.00 100.0 0.0000
 22 FTPD 07:51:09 DC$FTSRV Yes 100.0 0.00 0.00 0.00 0.0000

```

With the expanded field, you can see that processes 16 and 19 are actually issuing system calls at a very low rate.

---

# Saving Formatted Data

Once you have formatted the data in the most usable way, such as in the examples from Chapters 5 and 6, you can save your new views.

## To Save the Formatted Data:

**Step 1** In the **OPTION** field, type **S**.

**Step 2** Press **Enter**.

The Save View definition panel is displayed.

**Step 3** Fill out the panel with the appropriate information.

**Step 4** Press **Enter**.

A message is displayed in the upper right-hand corner to confirm that your view was successfully saved.

**Step 5** To exit, press **PF3**.

## To Create a Summarized View:

To create a summarized view, complete the following steps:

**Step 1** Select a tabular view to use as a base.

For an example, refer to “Creating a Summary View” on page 6-2.

**Step 2** Choose one or more columns by which to group.

For an example, refer to page 6-2.

**Step 3** Change its **Summarization type** (under Format) to reflect more meaningful data.

For an example, refer to “Formatting Summarized Data” on page 6-4.

**Step 4** Make sure you have the summarization types you want for each field.

**Step 5** Rename any fields as necessary.

For an example, refer to “Renaming Fields” on page 5-15.

## Expanding a Summary View

Once you create a summary view, you can tailor it to monitor particular items provided in the view. This customization allows you to focus on potential problems and track the status of certain fields.

A summary view is particularly useful if it is tailored to your site and left to run in automatic screen update (ASU) mode throughout the day. The view regularly updates itself and immediately indicates if something has gone wrong, so you can begin the debugging process.

To help you begin debugging from a summary view, a hyperlink is established automatically for the first field of every summary view.

**Note:** The first hyperlink in a summary view expands the selected row into all its constituent rows.

### To Expand a Summary View:

- Step 1** To clear any changes made in the previous example, type **Reset** and press **Enter**.
- Step 2** Display ASOVERZ, as shown in Figure 6-7.

**Figure 6-7 Expanding Process Information**

```

DDMMYYYY   HH:MM:SS  ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS -----
COMMAND  ===>
CURR WIN ===> 1          ALT WIN ===>
>W1 =ASOVERZ=====SJSC=====DDMMYYYY==HH:MM:SS====MVUSS====D==17
C Jobname  Hex  T Service  Total Total Idle%  %Delay  Prcs Total      PrcsTot
- - - - - ASID - Class   Dly%  Use%      Unknown AvgMem CPU Time      CPU%
AOPD      4E O OMVSNRM  0.00 0.00 0.00 100.00  8.6M 00:00:00.07  0.00
BPXOINIT  43 S SYSTEM   0.00 0.00 100.0 0.00  94208 00:00:00.03  0.00
CANDKPAS  7D S STCNRM   0.00 7.50 92.50 0.00  6.9M 00:00:23.47  0.25
CMQ30PAS  52 S STCPAS   0.00 0.00 100.0 0.00  3.0M 00:00:10.45  0.01
CNMPROCC  56 S STCLOW  0.00 0.00 100.0 0.00 765952 00:00:07.62  0.00
CTSGATE   1A S STCNRM   0.00 0.00 100.0 0.00 933888 00:00:02.69  0.00
DC$FTSRV  44 O SYSSTC   0.00 0.00 100.0 0.00  4.8M 00:00:00.02  0.00
DC$NFS    23 S STCNRM   0.00 0.00 100.0 0.00 17.0M 00:00:00.27  0.00
DC$NFSC   45 S SYSSTC   0.00 0.00 0.00 100.00  6.7M 00:00:00.15  0.00
DC$PAS    4F S STCNRM   0.00 7.50 92.50 0.00  7.6M 00:03:49.24  0.18
DC$PMAP   78 S STCNRM   0.00 0.00 100.0 0.00  4.2M 00:00:00.16  0.00
DC$SVIEW  79 S STCSYS   0.00 0.00 100.0 0.00 593920 00:00:00.13  0.00
DC$TCPIP  70 S SYSSTC   0.00 0.00 100.0 0.00 13.5M 00:00:38.84  0.03
INETD4    51 O OMVSNRM  0.00 0.00 100.0 0.00  4.6M 00:00:00.02  0.00
XTSTJMXP  77 S SYSSTC   0.00 0.00 100.0 0.00 974848 00:00:00.77  0.00
XTSTJPAS  74 S SYSSTC   0.00 2.50 97.50 0.00  7.8M 00:03:40.62  0.20
XTSTKPAS  6E S SYSSTC   0.00 2.50 97.50 0.00 10.9M 00:07:05.33  0.36

```

**Step 3** To discover more information about the processes running in a particular job, place the cursor on the jobname of the job that you want to expand and press **Enter**.

Depending on the number of processes with a particular job, either ASOVER or EZUPRC is displayed.

**Step 4** To discover more information about the process with jobname BPXOINIT, place your cursor on that jobname and press **Enter**.

The EZUPRC easy menu is displayed, as shown in Figure 6-8.

**Figure 6-8 Expanding Process Information**

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>                               SCROLL ==> CSR
CURR WIN ==> 1          ALT WIN ==>
W1 =ASOVERZ==EZUPRC==SJSC=====DDMMYYYY==HH:MM:SS====MVUSS====D====1
          Process Easy Menu

Current Pid ->                1
Dubbed Time ->                05:24:23
Dubbed Date ->                DDMMYYYY

Activity                                     General
. Overview                               +-----+ . Current Status
. Resource Usage                         | Place cursor on | . Command Name
. Delays                                 | menu item and  | . Detail
                                          |   press ENTER  |
Actions                                  +-----+
. Process/Thread
. Kill Process
. Display Files
. Process Limits
. Dump Process
. Return...

```

From here, you can hyperlink to other process views to show additional important information about the process.



---

---

# Chapter 7      **Redisplaying Data without Updating**

The data in a window is generally updated each time you press **Enter**. Sometimes, however, you do not want the data updated, especially when you want to debug a problem that lasts only for a minute or two. You need a way to use MAINVIEW for UNIX System Services to debug a problem without updating the data. You need alternate forms, as described in this chapter.

This chapter includes the following topics:

Understanding Queries and Forms . . . . .	7-2
Using Commands . . . . .	7-3

# Understanding Queries and Forms

Every view consists of one query and one form. The query instructs MAINVIEW for UNIX System Services to display the data that you have requested. The form determines how the data is summarized and displayed.

## To Determine the Field to be Queried:

**Step 1** Display PSOVER, as shown in Figure 7-1.

**Figure 7-1 PSOVER View**

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE (R.v.r.mm)MVUSS  -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =PSOVER=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===32
C  ProcessId Command  Elapsed  Jobname  Multi-  Total  Total  Total  Total  Sys Cal
-  -----  Name      ProcTime -----  Thread  Dly%   Run%   Zomb%   Othr%   Rat
   1  BPXPINPR  07:51:45  BPXOINIT  YES     100.0  0.00  0.00  0.00  0.0000
   6  inetd     07:51:34  INETD4   Yes     100.0  0.00  0.00  0.00  0.0000
   8  EZBTCPIP  07:51:16  DC$TCPIP No      0.00  100.0  0.00  0.00  0.0000
   9  EZBTSSL   07:51:11  DC$TCPIP No      0.00  100.0  0.00  0.00  0.0000
  11  EZACFALG  07:51:11  DC$TCPIP No     100.0  0.00  0.00  0.00  0.0722
  12  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  13  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  14  EZASASUB  07:51:10  DC$TCPIP No     100.0  0.00  0.00  0.00  0.0240
  15  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  16  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  17  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  18  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  19  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  20  GFSCRPCD  07:51:10  DC$NFSC  No      0.00  0.00  0.00  100.0  0.0000
  22  FTPD      07:51:09  DC$FTSRV Yes     100.0  0.00  0.00  0.00  0.0000
  23  BBDTCPL  07:51:08  DC$SVIEW Yes     100.0  0.00  0.00  0.00  0.0000
  24  PORTMAP   07:51:07  DC$PMAP  NO     100.0  0.00  0.00  0.00  0.0000
  25  GFSAMAIN  07:51:07  DC$NFS   NO     100.0  0.00  0.00  0.00  0.0000
  26  TCPMHFSS  07:51:05  XTSTJPAS NO      0.00  100.0  0.00  0.00  0.0240
  28  BBM9SZ20  07:50:54  XTSTKPAS NO      0.00  100.0  0.00  0.00  2.3846
  29  BBW9IC00  07:50:51  XTSTJMXP NO     100.0  0.00  0.00  0.00  0.0000
  30  ECACMGRS  07:50:42  CTSGATE  NO     100.0  0.00  0.00  0.00  0.0000

```

While looking at PSOVER, you notice that a process is delayed for a large portion of the interval. You could type **PSDELAY <field\_name>** on the **COMMAND** line, but the data will be immediately updated. Since you want to study the data without updating it, you can hyperlink on the **Total Dly%** field.

**Step 2** Place your cursor on the delayed process under that field and press **Enter**.

The new output is displayed, as shown in Figure 7-2 on page 7-3.

Figure 7-2 PSDELAY View

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>                                     SCROLL ==> CSR
CURR WIN ==> 1           ALT WIN ==>
>W1 =PSOVER==PSDELAY==SJSC=====*=====DDMMYYYY==HH:MM:SS==MVUSS==D==1
C  ProcessId Command  Elapsed  Jobname          Total Delay % Total Total %Delay
- ----- Name      ProcTime -----          0...50...100 Zomb% Othr% MsgRcv
      1 BPXPINPR 08:34:17 BPXOINIT 100.00          0.00 0.00 0.00

```

The window information line contains a new form field to indicate that you are using an alternate form of PSDELAY. By comparing the **Total Dly%** field, you can determine that the data has not been updated. You can now see the details of the process at the time the problem occurred.

## Using Commands

The following table briefly describes the available commands. If you need more information on a command, type **HELP** <command name> on the **COMMAND** line.

To Do This	Use This Command
Cycle forward to the next form in the stack.	FNEXT
Cycle back to the last form in the stack.	FPREV
Return to the last form; if there are no more forms in the stack, return to the last query.	END
Delete the current query and all its forms; return to the previous view.	ENDQuery
Change the parameters of a form (without updating the data).	PARm
Change the parameters of a query and update the data.	QPARm
Display a list of the filters currently in effect for both the query and the form.	SHOWFilt
Update the data in one window without updating data in the others.	DATARefresh



---

---

# Chapter 8    Filtering Data

You can use the L-Filter option in view customization to filter data so that only certain rows are displayed. This technique works well when you want to restrict the display to something very simple.

To avoid using view customization while filtering data based on more than one criteria, you can use the **WHERE** command.

# Using the WHERE Command

## To Use the WHERE Command:

**Step 1** Display PSOVER, as shown in Figure 8-1.

**Figure 8-1 Filtering PSOVER**

```

DDMMYYYY   HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE (Rv.r.mm)MVUSS  -----
COMMAND  ==>>>                                     SCROLL ==>> PAGE
CURR WIN ==>> 1          ALT WIN ==>>
>W1 =PSOVER=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D=====4
C  ProcessId Command  Elapsed  Jobname  Multi-  Total  Total  Total  Total  Sys  Cal
-  -----  Name      ProcTime -----  Thread  Dly%   Run%   Zomb%  Othr%   Rat
   1  BPXPINPR 07:51:45  BPXOINIT  YES     100.0  0.00  0.00  0.00  0.0000
   6  inetd    07:51:34  INETD4   Yes     100.0  0.00  0.00  0.00  0.0000
   8  EZBTCPIP 07:51:16  DC$TCPIP No       0.00 100.0  0.00  0.00  0.0000
   9  EZBTTSSL 07:51:11  DC$TCPIP No       0.00 100.0  0.00  0.00  0.0000
  11  EZACFALG 07:51:11  DC$TCPIP No     100.0  0.00  0.00  0.00  0.0722
  12  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  13  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  14  EZASASUB 07:51:10  DC$TCPIP No     100.0  0.00  0.00  0.00  0.0240
  15  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  16  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  17  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  18  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  19  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  20  GFSCRPCD 07:51:10  DC$NFSC  No       0.00  0.00  0.00 100.0  0.0000
  22  FTPD     07:51:09  DC$FTSRV Yes     100.0  0.00  0.00  0.00  0.0000
  23  BBSDTCPL 07:51:08  DC$SVIEW Yes     100.0  0.00  0.00  0.00  0.0000
  24  PORTMAP  07:51:07  DC$PMAP  NO      100.0  0.00  0.00  0.00  0.0000

```

In this example, you want to determine which processes have a significant delay so you know which processes might need your attention.

Before using the WHERE command, you must know the element name of the field on which you want to place a filter.

To determine the element name, follow these steps:

- Step 1** Place the cursor on the fields that you want to filter. For this example, it is the **Total Dly%** field.
- Step 2** To determine the element name for **Total Dly%**, place your cursor on the field name and press **PF1** (help), as shown in Figure 8-2 on page 8-3.

Figure 8-2 Determining the Element Name

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND ==>                               SCROLL ==> PAGE
CURR WIN ==> 1          ALT WIN ==>
>W1 =PSOVER=====SJSC=====*=====DDMMYYYY==HH:MM:SS==MVUSS==D==42
C ProcessId Command Elapsed Jobname Multi- Total Total Total Total Sys Cal
- ----- Name ProcTime ----- Thread Dly% Run% Zomb% Othr% Rat
  1 BPXPINPR 14 +-----+
  6 inetd 14 | Help          Total Process Delay Percent          Help |
  8 EZBTCPIP 14 | Command ==>                               Scroll ==> CSR |
  9 EZBTSSL 14 | -----+-----+
 10 EZBTMCTL 14 |
 11 EZACFALG 14 | The Total Process Delay Percent is the sum of
 13 EZASASUB 14 | fields that indicate delays beyond the users
 14 FTPD 14 | control such as filesystem kernel wait.
 15 PORTMAP 14 |
 16 GFSAMAIN 14 |
 17 BBSDTCPL 14 | The element name for this field is PRIDLYP.
 18 BPXVCMT 14 |
 19 GFSCRPCD 14 | Extended Information
 20 GFSCRPCD 14 |
 21 GFSCRPCD 14 | This element hyperlinks to:
 22 GFSCRPCD 14 +-----+
 23 GFSCRPCD 14
 24 GFSCRPCD 14:16:25 DC$NFSC 0.00 0.00 0.00 0.00 0.00000

```

**Step 3** Write down the element name.

For **Total Dly%**, the element name is **PRIDLYP**.

**Step 4** To return to the view, press **PF3**.

**Step 5** On the **COMMAND** line, type **WHERE**.

The Set Where Filter panel is displayed, as shown in Figure 8-3 on page 8-4.

**Figure 8-3 Set Where Filter Panel**

```
DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ==>                                     SCROLL ==> PAGE
CURR WIN ==> 1          ALT WIN ==>
>W1 =PSOVER=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===42

----- SET WHERE FILTER -----
COMMAND  ==>

Where Condition:

Type END to update the form filter
Cancel to quit without updating
```

- Step 6** Choose the criteria by which you want to filter PSOVER. For this example, you are looking for a total delay of 50% or higher.
- Step 7** In the **Where Condition** field, type the following:

**PRIDLYP > 50.0**

Figure 8-4 on page 8-5 provides an example of what you should type.

**Figure 8-4** Inserting Filter Criteria

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =PSOVER=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===42

----- SET WHERE FILTER -----
COMMAND  ==>

Where Condition:
PRIDLYP > 50.0

Type END to update the form filter
  CANCEL to quit without updating

```

**Step 8** To return to PSOVER, press **PF3**.

PSOVER is displayed with the filtered data, as shown in Figure 8-5.

**Figure 8-5** PSOVER View with Filtered Data

```

DDMMYYYY  HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Rv.r.mm)MVUSS -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =PSOVER=====SJSC=====*=====DDMMYYYY==HH:MM:SS====MVUSS====D===10
C  ProcessId Command  Elapsed  Jobname  Multi-  Total  Total  Total  Total  Sys Cal
-  -----  Name      ProcTime -----  Thread  Dly%   Run%  Zomb%  Othr%   Rat
   1  BPXPINPR  14:32:32  BPXOINIT  Yes     100.0  0.00  0.00  0.00  0.0000
   6  inetd     14:32:20  INETD4   Yes     100.0  0.00  0.00  0.00  0.0000
  11  EZACFALG  14:31:55  DC$TCPIP No      100.0  0.00  0.00  0.00  0.0000
  13  EZASASUB  14:31:55  DC$TCPIP No      100.0  0.00  0.00  0.00  0.0000
  14  FTPD      14:31:53  DC$FTSRV No      100.0  0.00  0.00  0.00  0.0000
  15  PORTMAP   14:31:51  DC$PMAP  No      100.0  0.00  0.00  0.00  0.0000
  16  GFSAMAIN  14:31:51  DC$NFS   No      100.0  0.00  0.00  0.00  0.0000
  17  BBSDTCPL  14:31:50  DC$SVIEW No      100.0  0.00  0.00  0.00  0.0000
  29  BBW9IC00  14:31:36  XTSTJMX  No      100.0  0.00  0.00  0.00  0.0000
  31  ECACMGRS  14:31:30  CTSGATE  No      100.0  0.00  0.00  0.00  0.0000
  69  CSQXRCTL  06:55:51  CSQACHIN No      100.0  0.00  0.00  0.00  0.0000
  71  DSNVEUS3  06:50:14  DB2HDIST No      100.0  0.00  0.00  0.00  0.0000
  75  SMLoad    04:40:28  CMQ30PAS NO      100.0  0.00  0.00  0.00  0.0000

```

As you can see, the only processes listed are those that have a total delay greater than 50 percent. You can now study these processes to determine if there is a problem.

The following list shows statements that you can use with the WHERE command:

- AND
- BETWEEN
- IN
- NOT BETWEEN
- NOT IN
- OR

in conjunction with these operands:

- =
- <> (NOT EQUAL TO)
- >
- >=
- <
- <=

The WHERE equation can include an element and a constant, or two elements.

---

---

# Glossary

This glossary defines BMC Software terminology. Other dictionaries and glossaries can be used in conjunction with this glossary.

Since this glossary pertains to BMC Software-related products, some of the terms defined might not appear in this book.

To help you find the information you need, this glossary uses the following cross-references:

*Contrast with* indicates a term that has a contrary or contradictory meaning.

*See* indicates an entry that is a synonym or contains expanded information.

*See also* indicates an entry that contains related information.

<b>action</b>	Defined operation, such as modifying a MAINVIEW window, that is performed in response to a command. <i>See</i> object.
<b>active window</b>	Any MAINVIEW window in which data can be refreshed. <i>See</i> alternate window, current window, window.
<b>administrative view</b>	Display from which a product's management tasks are performed, such as the DSLIST view for managing historical data sets. <i>See</i> view.
<b>ALT WIN field</b>	Input field that allows you to specify the window identifier for an alternate window where the results of a hyperlink are displayed. <i>See</i> alternate window.
<b>Alternate Access</b>	<i>See</i> MAINVIEW Alternate Access.
<b>alternate form</b>	View requested through the FORM command that changes the format of a previously displayed view to show related information. <i>See also</i> form, query.

---

<b>alternate window</b>	(1) Window that is specifically selected to display the results of a hyperlink. (2) Window whose identifier is defined to the ALT WIN field. <i>Contrast with</i> current window. <i>See</i> active window, window, ALT WIN field.
<b>analyzer</b>	(1) Online display that presents a snapshot of status and activity data and indicates problem areas. (2) Component of CMF MONITOR. <i>See</i> CMF MONITOR Analyzer.
<b>application</b>	(1) Program that performs a specific set of tasks within a MAINVIEW product. (2) In MAINVIEW VistaPoint, combination of workloads to enable display of their transaction performance data in a single view.
<b>application trace</b>	<i>See</i> trace.
<b>ASCH workload</b>	Workload comprising Advanced Program-to-Program Communication (APPC) address spaces.
<b>AutoCustomization</b>	Online facility for customizing the installation of products. AutoCustomization provides an ISPF panel interface that both presents customization steps in sequence and provides current status information about the progress of the installation.
<b>automatic screen update</b>	Usage mode wherein the currently displayed screen is refreshed automatically with new data at an interval you specify. Invoked by the ASU command.
<b>batch workload</b>	Workload consisting of address spaces running batch jobs.
<b>BBI</b>	Basic architecture that distributes work between workstations and multiple OS/390 targets for BMC Software MAINVIEW products.
<b>BBI-SS PAS</b>	<i>See</i> BBI subsystem product address space.
<b>BBI subsystem product address space (BBI-SS PAS)</b>	OS/390 subsystem address space that manages communication between local and remote systems and that contains one or more of the following products: <ul style="list-style-type: none"> <li>• MAINVIEW AutoOPERATOR</li> <li>• MAINVIEW for CICS</li> <li>• MAINVIEW for DB2</li> <li>• MAINVIEW for DBCTL</li> <li>• MAINVIEW for IMS Online</li> <li>• MAINVIEW for MQSeries (formerly Command MQ for S/390)</li> <li>• MAINVIEW SRM</li> <li>• MAINVIEW VistaPoint (for CICS, DB2, DBCTL, and IMS workloads)</li> </ul>
<b>BBPARM</b>	<i>See</i> parameter library.

---

<b>BBPROC</b>	<i>See</i> procedure library.
<b>BBPROF</b>	<i>See</i> profile library.
<b>BBSAMP</b>	<i>See</i> sample library.
<b>BBV</b>	<i>See</i> MAINVIEW Alternate Access.
<b>BBXS</b>	BMC Software Subsystem Services. Common set of service routines loaded into common storage and used by several BMC Software MAINVIEW products.
<b>border</b>	Visual indication of the boundaries of a window.
<b>bottleneck analysis</b>	Process of determining which resources have insufficient capacity to provide acceptable service levels and that therefore can cause performance problems.
<b>CA-Disk</b>	Data management system by Computer Associates that replaced the DMS product.
<b>CAS</b>	Coordinating address space. One of the address spaces used by the MAINVIEW windows environment architecture. The CAS supplies common services and enables communication between linked systems. Each OS/390 or z/OS image requires a separate CAS. Cross-system communication is established through the CAS using VTAM and XCF communication links.
<b>CFMON</b>	<i>See</i> coupling facility monitoring.
<b>chart</b>	Display format for graphical data. <i>See also</i> graph.
<b>CICSplex</b>	User-defined set of one or more CICS systems that are controlled and managed as a single functional entity.
<b>CMF MONITOR</b>	Comprehensive Management Facility MONITOR. Product that measures and reports on all critical system resources, such as CPU, channel, and device usage; memory, paging, and swapping activity; and workload performance.
<b>CMF MONITOR Analyzer</b>	Batch component of CMF MONITOR that reads the SMF user and 70 series records created by the CMF MONITOR Extractor and/or the RMF Extractor and formats them into printed system performance reports.
<b>CMF MONITOR Extractor</b>	Component of CMF that collects performance statistics for CMF MONITOR Analyzer, CMF MONITOR Online, MAINVIEW for OS/390, and RMF postprocessor. <i>See</i> CMF MONITOR Analyzer, CMF MONITOR Online, MAINVIEW for OS/390.

---

**CMF MONITOR Online**

Component of CMF that uses the MAINVIEW window interface to present data on all address spaces, their use of various system resources, and the delays that each address space incurs while waiting for access to these resources. *See* CMF MONITOR, MAINVIEW for OS/390.

**CMF Type 79 API**

Application programming interface, provided by CMF, that provides access to MAINVIEW SMF-type 79 records.

**CMFMON**

Component of CMF MONITOR that simplifies online retrieval of information about system hardware and application performance and creates MAINVIEW SMF-type 79 records.

The CMFMON *online facility* can be used to view data in one or more formatted screens.

The CMFMON *write facility* can be used to write collected data as MAINVIEW SMF-type 79 records to an SMF or sequential data set.

**CMRDETL**

MAINVIEW for CICS data set that stores detail transaction records (type 6E) and abend records (type 6D). Detail records are logged for each successful transaction. Abend records are written when an abend occurs. Both records have the same format when stored on CMRDETL.

**CMRSTATS**

MAINVIEW for CICS data set that stores both CICS operational statistic records, at five-minute intervals, and other records, at intervals defined by parameters specified during customization (using CMRSOPT).

**column**

Vertical component of a view or display, typically containing fields of the same type of information, that varies by the objects associated in each row.

**collection interval**

Length of time data is collected. *See also* delta mode, total mode.

**command delimiter**

Special character, usually a ; (semicolon), used to stack commands typed concurrently on the COMMAND line for sequential execution.

**COMMAND line**

Line in the control area of the display screen where primary commands can be typed. *Contrast with* line command column.

**Command MQ Automation D/S**

Command MQ agents, which provide local proactive monitoring for both MQSeries and MSMQ (Microsoft message queue manager). The Command MQ agents operate at the local node level where they continue to perform functions regardless of the availability of the MQM (message queue manager) network. Functionality includes automatic monitoring and restarts of channels, queue managers, queues and command servers. In cases where automated recovery is not possible, the agents transport critical alert information to a central console.

---

### **Command MQ Automation S/390**

Command MQ component, which monitors the MQM (message queue manager) networks and intercedes to perform corrective actions when problems arise. Solutions include:

- Dead-Letter Queue management
- System Queue Archival
- Service Interval Performance solutions
- Channel Availability

These solutions help ensure immediate relief to some of the most pressing MQM operations and performance problems.

### **Command MQ for D/S**

Command MQ for D/S utilizes a true client/server architecture and employs resident agents to provide configuration, administration, performance monitoring and operations management for the MQM (message queue manager) network.

### **Command MQ for S/390**

*See* MAINVIEW for MQSeries.

### **COMMON STORAGE MONITOR**

Component of MAINVIEW for OS/390 that monitors usage and reconfigures OS/390 or z/OS common storage blocks.

### **composite workload**

Workload made up of a WLM workload or other workloads, which are called *constituent workloads*.

### **constituent workload**

Member of a composite workload. Constituent workloads in a composite usually belong to a single workload class, but sometimes are mixed.

### **contention**

Occurs when there are more requests for service than there are servers available.

### **context**

In a Plex Manager view, field that contains the name of a target or group of targets specified with the CONTEXT command. *See* scope, service point, SSI context, target context.

### **CONTEXT command**

Specifies either a MAINVIEW product and a specific target for that product (*see* target context) or a MAINVIEW product and a name representing one or more targets (*see* SSI context) for that product.

---

<b>control statement</b>	(1) Statement that interrupts a sequence of instructions and transfers control to another part of the program. (2) Statement that names samplers and other parameters that configure the MAINVIEW components to perform specified functions. (3) In CMF MONITOR, statement in a parameter library member used to identify a sampler in the extractor or a report in the analyzer, or to describe either component's processing requirements to the operating system.
<b>coupling facility monitoring (CFMON)</b>	Coupling facility views that monitor the activity of your system's coupling facilities.
<b>current data</b>	Data that reflects the system in its current state. The two types of current data are real-time data and interval data. <i>Contrast with</i> historical data. <i>See also</i> interval data, real-time data.
<b>current window</b>	In the MAINVIEW window environment, window where the main dialog with the application takes place. The current window is used as the default window destination for commands issued on the COMMAND line when no window number is specified. <i>Contrast with</i> alternate window. <i>See</i> active window, window.
<b>DASD</b>	(Direct Access Storage Device) (1) A device with rotating recording surfaces that provides immediate access to stored data. (2) Any device that responds to a DASD program.
<b>DASD ADVISOR</b>	An interactive software tool that diagnoses DASD performance problems and makes recommendations to reduce overall service time. This tool measures and reports on the operational performance of IBM and IBM-compatible devices.
<b>data collector</b>	Program that belongs to a MAINVIEW product and that collects data from various sources and stores the data in records used by views. For example, MAINVIEW for OS/390 data collectors obtain data from OS/390 or z/OS services, OS/390 or z/OS control blocks, CMF MONITOR Extractor control blocks, and other sources. <i>Contrast with</i> extractor.
<b>delta mode</b>	(1) In MAINVIEW for DB2 analyzer displays, difference between the value sampled at the start of the current statistics interval and the value sampled by the current analyzer request. <i>See also</i> statistics interval. (2) In CMFMON, usage mode wherein certain columns of data reflect the difference in values between one sample cycle and the next. Invoked by the DELta ON command. <i>See also</i> collection interval, sample cycle, total mode.
<b>DFSMS</b>	(Data Facility Storage Management System) Data management, backup, and HSM software from IBM for OS/390 or z/OS mainframes.
<b>DMR</b>	<i>See</i> MAINVIEW for DB2.

---

<b>DMS</b>	(Data Management System) <i>See</i> CA-Disk.
<b>DMS2HSM</b>	<i>See</i> MAINVIEW SRM DMS2HSM.
<b>DSO</b>	(Data Set Optimizer) CMF MONITOR Extractor component that uses CMF MONITOR Extractor data to produce reports specifying the optimal ordering of data sets on moveable head devices.
<b>EasyHSM</b>	<i>See</i> MAINVIEW SRM EasyHSM.
<b>EasyPOOL</b>	<i>See</i> MAINVIEW SRM EasyPOOL.
<b>EasySMS</b>	<i>See</i> MAINVIEW SRM EasySMS.
<b>element</b>	(1) Data component of a data collector record, shown in a view as a field. (2) Internal value of a field in a view, used in product functions.
<b>element help</b>	Online help for a field in a view. The preferred term is <i>field help</i> .
<b>Enterprise Storage Automation</b>	<i>See</i> MAINVIEW SRM Enterprise Storage Automation.
<b>event</b>	A message issued by Enterprise Storage Automation. User-defined storage occurrences generate events in the form of messages. These events provide an early warning system for storage problems and are routed to user-specified destinations for central viewing and management.
<b>Event Collector</b>	Component for MAINVIEW for IMS Online, MAINVIEW for IMS Offline, and MAINVIEW for DBCTL that collects data about events in the IMS environment. This data is required for Workload Monitor and optional for Workload Analyzer (except for the workload trace service). This data also is recorded as transaction records (X'FA') and program records (X'F9') on the IMS system log for later use by the MAINVIEW for IMS Offline components: Performance Reporter and Transaction Accountant.
<b>expand</b>	Predefined link from one display to a related display. <i>See also</i> hyperlink.
<b>extractor</b>	Program that collects data from various sources and keeps the data control blocks to be written as records. Extractors obtain data from services, control blocks, and other sources. <i>Contrast with</i> data collector.
<b>extractor interval</b>	<i>See</i> collection interval.
<b>fast path</b>	Predefined link between one screen and another. To use the fast path, place the cursor on a single value in a field and press <b>Enter</b> . The resulting screen displays more detailed information about the selected value. <i>See also</i> hyperlink.

---

<b>field</b>	Group of character positions within a screen or report used to type or display specific information.
<b>field help</b>	Online help describing the purpose or contents of a field on a screen. To display field help, place the cursor anywhere in a field and press <b>PF1</b> (HELP). In some products, field help is accessible from the screen help that is displayed when you press <b>PF1</b> .
<b>filter</b>	Selection criteria used to limit the number of rows displayed in a view. Data that does not meet the selection criteria is not displayed. A filter is composed of an element, an operator, and an operand (a number or character string). Filters can be implemented in view customization, through the PARM/QPARM commands, or through the Where/QWhere commands. Filters are established against elements of data.
<b>fire</b>	The term used to indicate that an event has triggered an action. In MAINVIEW AutoOPERATOR, when a rule selection criteria matches an incoming event and <i>fires</i> , the user-specified automation actions are performed. This process is also called <i>handling</i> the event.
<b>fixed field</b>	Field that remains stationary at the left margin of a screen that is scrolled either right or left.
<b>FOCAL POINT</b>	MAINVIEW product that displays a summary of key performance indicators across systems, sites, and applications from a single terminal.
<b>form</b>	One of two constituent parts of a view; the other is query. A form defines how the data is presented; a query identifies the data required for the view. <i>See also</i> query, view.
<b>full-screen mode</b>	Display of a MAINVIEW product application or service on the entire screen. There is no window information line. <i>Contrast with</i> windows mode.
<b>global command</b>	Any MAINVIEW window interface command that can affect all windows in the window area of a MAINVIEW display.
<b>graph</b>	Graphical display of data that you select from a MAINVIEW window environment view. <i>See also</i> chart.
<b>hilevel</b>	For MAINVIEW products, high-level data set qualifier required by a site's naming conventions.
<b>historical data</b>	(1) Data that reflects the system as it existed at the end of a past recording interval or the duration of several intervals. (2) Any data stored in the historical database and retrieved using the TIME command. <i>Contrast with</i> current data, interval data and real-time data.

---

**historical database** Collection of performance data written at the end of each installation-defined recording interval and containing up to 100 VSAM clusters. Data is extracted from the historical database with the TIME command. *See* historical data.

**historical data set** In MAINVIEW products that display historical data, VSAM cluster file in which data is recorded at regular intervals.

**HSM** (Hierarchical Storage Management) Automatic movement of files from hard disk to slower, less-expensive storage media. The typical hierarchy is from magnetic disk to optical disk to tape.

**hyperlink** (1) Preset field in a view or an EXPAND line on a display that permits you to

- access cursor-sensitive help
- issue commands
- link to another view or display

The transfer can be either within a single product or to a related display/view in a different BMC Software product. Generally, hyperlinked fields are highlighted. (2) Cursor-activated short path from a topic or term in online help to related information. *See also* fast path.

**Image log** Collection of screen-display records. Image logs can be created for both the BBI-SS PAS and the BBI terminal session (TS).

The BBI-SS PAS Image log consists of two data sets that are used alternately: as one fills up, the other is used. Logging to the BBI-SS PAS Image log stops when both data sets are filled and the first data set is not processed by the archive program.

The TS Image log is a single data set that wraps around when full.

### **IMSplex System Manager (IPSM)**

MVIMS Online and MVDBC service that provides Single System Image views of resources and bottlenecks for applications across one or more IMS regions and systems.

**interval data** Cumulative data collected during a collection interval. Intervals usually last from 15 to 30 minutes depending on how the recording interval is specified during product customization. *Contrast with* historical data.

**Note:** If change is made to the workloads, a new interval will be started.

*See also* current data and real-time data.

**InTune** Product for improving application program performance. It monitors the program and provides information used to reduce bottlenecks and delays.

---

<b>IRUF</b>	IMS Resource Utilization File (IRUF). IRUFs can be either detail (one event, one record) or summarized (more than one event, one record). A detail IRUF is created by processing the IMS system log through a program called IMFLEEDIT. A summarized IRUF is created by processing one or more detail IRUFs, one or more summarized IRUFs, or a combination of both, through a sort program and the TASCOSTR program.
<b>job activity view</b>	Report about address space consumption of resources. <i>See</i> view.
<b>journal</b>	Special-purpose data set that stores the chronological records of operator and system actions.
<b>Journal log</b>	Collection of messages. Journal logs are created for both the BBI-SS PAS and the BBI terminal session (TS).  The BBI-SS PAS Journal log consists of two data sets that are used alternately: as one fills up, the other is used. Logging to the BBI-SS PAS Journal log stops when both data sets are filled and the first data set is not being processed by the archive program.  The TS Journal log is a single data set that wraps around when full.
<b>line command</b>	Command that you type in the line command column in a view or display. Line commands initiate actions that apply to the data displayed in that particular row.
<b>line command column</b>	Command input column on the left side of a view or display. <i>Contrast with</i> COMMAND line.
<b>Log Edit</b>	In the MAINVIEW for IMS Offline program named IMFLEEDIT, function that extracts transaction (X'FA') and program (X'F9') records from the IMS system log. IMFLEEDIT also extracts certain records that were recorded on the system log by IMS. IMFLEEDIT then formats the records into a file called the IMS Resource Utilization File (IRUF).
<b>MAINVIEW</b>	BMC Software integrated systems management architecture.
<b>MAINVIEW Alarm Manager (MV ALARM)</b>	In conjunction with other MAINVIEW products, notifies you when an exception occurs. MAINVIEW Alarm Manager is capable of monitoring multiple systems simultaneously, which means that MAINVIEW Alarm Manager installed on one system keeps track of your entire sysplex. You can then display a single view that shows exceptions for all MAINVIEW performance monitors within your OS/390 or z/OS enterprise.

---

**MAINVIEW Alternate Access**

Enables MAINVIEW products to be used without TSO by providing access through EXCP and VTAM interfaces.

**MAINVIEW Application Program Interface (MVAPI)**

A CLIST- or REXX-based, callable interface that allows MAINVIEW AutoOPERATOR EXECs to access MAINVIEW monitor product view data.

**MAINVIEW AutoOPERATOR**

Product that uses tools, techniques, and facilities to automate routine operator tasks and provide online performance monitoring, and that achieves high availability through error minimization, improved productivity, and problem prediction and prevention.

**MAINVIEW control area**

In the MAINVIEW window environment, first three lines at the top of the view containing the window information line and the COMMAND, SCROLL, CURR WIN, and ALT WIN lines. The control area cannot be customized and is part of the information display. *Contrast with* MAINVIEW display area, MAINVIEW window area.

**MAINVIEW Desktop** Version of the MAINVIEW window interface designed to run on OS/2 and Windows workstations.

**MAINVIEW display area**

*See* MAINVIEW window area.

**MAINVIEW Explorer** Product that provides access to MAINVIEW products from a Web browser running under Windows. MAINVIEW Explorer replaces MAINVIEW Desktop.

**MAINVIEW for CICS** Product (formerly MV MANAGER for CICS) that provides real-time application performance analysis and monitoring for CICS system management.

**MAINVIEW for DB2** Product (formerly MV MANAGER for DB2) that provides real-time and historical application performance analysis and monitoring for DB2 subsystem management.

**MAINVIEW for DBCTL (MVDBC)**

Product that provides real-time application performance analysis and monitoring for DBCTL management.

**MAINVIEW for IMS (MVIMS) Offline**

Product with a Performance Reporter component that organizes data and prints reports used to analyze IMS performance and a Transaction Accountant component that produces cost accounting and user charge-back records and reports.

---

**MAINVIEW for IMS (MVIMS) Online**

Product that provides real-time application performance analysis and monitoring for IMS management.

**MAINVIEW for IP**

Product that monitors OS/390 and z/OS mission-critical application performance as it relates to TCP/IP stack usage. Collected data includes availability, connections, response times, routers, service levels, storage, traffic, Web cache, and so on.

**MAINVIEW for Linux–Servers**

Product that allows you to monitor the performance of your Linux systems from the MAINVIEW windows interface.

**MAINVIEW for MQSeries (formerly known as Command MQ for S/390)**

Delivers comprehensive capabilities for configuration, administration, performance monitoring and operations management for an entire MQM (message queue manager) network.

**MAINVIEW for OS/390**

System management application (formerly known as MAINVIEW for MVS prior to version 2.5). Built upon the MAINVIEW window environment architecture, it uses the window interface to provide access to system performance data and other functions necessary in the overall management of an enterprise.

**MAINVIEW for UNIX System Services**

System management application that allows you to monitor the performance of the Unix System Services from a MAINVIEW window interface.

**MAINVIEW for VTAM**

Product that displays application performance data by application, transaction ID, and LU name. This collected data includes connections, response time statistics, application availability, and application throughput.

**MAINVIEW for WebSphere Application Server (formerly known as MAINVIEW for WebSphere)**

Product that provides extensive monitoring for the IBM WebSphere Application Server for z/OS and OS/390 environment.

**MAINVIEW Selection Menu**

ISPF selection panel that provides access to all MAINVIEW windows-mode and full-screen mode products.

**MAINVIEW SRM**

*See* MAINVIEW Storage Resource Manager (SRM).

**MAINVIEW SRM DMS2HSM**

Product that facilitates the conversion of CA-Disk, formerly known as DMS, to HSM.

---

**MAINVIEW SRM EasyHSM**

Product that provides online monitoring and reporting to help storage managers use DFHSM efficiently.

**MAINVIEW SRM EasyPOOL**

Product that provides control over data set allocation and enforcement of allocation and naming standards. EasyPOOL functions operate at the operating system level to intercept normal job processing, thus providing services without any JCL changes.

**MAINVIEW SRM EasySMS**

Product that provides tools that aid in the conversion to DFSMS and provides enhancement to the DFSMS environment after implementation. EasySMS consists of the EasyACS functions, the SMSACSTE function, and the Monitoring and Positioning Facility.

**MAINVIEW SRM Enterprise Storage Automation**

Product that delivers powerful event generation and storage automation technology across the storage enterprise. Used in conjunction with MAINVIEW AutoOPERATOR, automated solutions to perform pool, volume, application, or data set-level manipulation can be created and used in response to any condition or invoked to perform ad hoc requests.

**MAINVIEW SRM SG-Auto**

Product that provides early warning notification of storage anomalies and automated responses to those anomalies based on conditions in the storage subsystem.

**MAINVIEW SRM SG-Control**

Product that provides real-time monitoring, budgeting, and control of DASD space utilization.

**MAINVIEW SRM StopX37/II**

Product that provides enhancements to OS/390 or z/OS space management, reducing the incidence of space-related processing problems. The StopX37/II functions operate at the system level to intercept abend conditions or standards violations, thus providing services without any JCL changes.

**MAINVIEW SRM StorageGUARD**

Product that monitors and reports on DASD consumption and provides historical views to help control current and future DASD usage.

**MAINVIEW Storage Resource Manager (SRM)**

Suite of products that assist in all phases of OS/390 or z/OS storage management. MAINVIEW SRM consists of products that perform automation, reporting, trend analysis, and error correction for storage management.

---

## **MAINVIEW SYSPROG Services**

*See SYSPROG services.*

## **MAINVIEW VistaPoint**

Product that provides enterprise-wide views of performance. Application and workload views are available for CICS, DB2, DBCTL, IMS, OS/390, or z/OS. Data is summarized at the level of detail needed; for example, views can be for a single target, an OS/390 or z/OS image, or an entire enterprise.

## **MAINVIEW window area**

Portion of the information display that is not the control area and in which views are displayed and windows opened. It includes all but the first three lines of the information display. *Contrast with* MAINVIEW control area.

## **monitor**

Online service that measures resources or workloads at user-defined intervals and issues warnings when user-defined thresholds are exceeded.

## **Multi-Level Automation (MLA)**

The user-defined, multiple step process in Enterprise Storage Automation that implements solutions in a tiered approach, where solutions are invoked one after another until the condition is resolved.

## **MVALARM**

*See* MAINVIEW Alarm Manager.

## **MVAPI**

*See* MAINVIEW Application Program Interface.

## **MVCICS**

*See* MAINVIEW for CICS.

## **MVDB2**

*See* MAINVIEW for DB2.

## **MVDBC**

*See* MAINVIEW for DBCTL.

## **MVIMS**

*See* MAINVIEW for IMS.

## **MVIP**

*See* MAINVIEW for IP.

## **MVLNX**

*See* MAINVIEW for Linux–Servers.

## **MVMQ**

*See* MAINVIEW for MQSeries.

## **MVMVS**

*See* MAINVIEW for OS/390.

## **MVScope**

MAINVIEW for OS/390 application that traces both CPU usage down to the CSECT level and I/O usage down to the channel program level.

## **MVSRM**

*See* MAINVIEW Storage Resource Manager (SRM).

## **MVSRMHSM**

*See* MAINVIEW SRM EasyHSM.

---

<b>MVSRMSGC</b>	<i>See</i> MAINVIEW SRM SG-Control.
<b>MVSRMSGD</b>	<i>See</i> MAINVIEW SRM StorageGUARD.
<b>MVSRMSGP</b>	<i>See</i> MAINVIEW SRM StorageGUARD.
<b>MVUSS</b>	<i>See</i> MAINVIEW for UNIX System Services.
<b>MVVP</b>	<i>See</i> MAINVIEW VistaPoint.
<b>MVVTAM</b>	<i>See</i> MAINVIEW for VTAM.
<b>MVWEB</b>	<i>See</i> MAINVIEW for WebSphere Application Server.
<b>nested help</b>	Multiple layers of help pop-up windows. Each successive layer is accessed by clicking a hyperlink from the previous layer.
<b>object</b>	<p>Anything you can manipulate as a single unit. MAINVIEW objects can be any of the following: product, secondary window, view, row, column, or field.</p> <p>You can issue an action against an object by issuing a line command in the line command column to the left of the object. <i>See</i> action.</p>
<b>OMVS workload</b>	Workload consisting of OS/390 OpenEdition address spaces.
<b>online help</b>	Help information that is accessible online.
<b>OS/390 and z/OS Installer</b>	BMC Software common installation system for mainframe products.
<b>OS/390 product address space (PAS)</b>	Address space containing OS/390 or z/OS data collectors, including the CMF MONITOR Extractor. Used by MAINVIEW for OS/390, MAINVIEW for UNIX System Services, and CMF MONITOR products. <i>See</i> PAS.
<b>parameter library</b>	<p>Data set consisting of members that contain parameters for specific MAINVIEW products or a support component There can be several versions:</p> <ul style="list-style-type: none"> <li>• the distributed parameter library, called BBPARAM</li> <li>• a site-specific parameter library or libraries</li> </ul> <p>These can be</p> <ul style="list-style-type: none"> <li>• a library created by AutoCustomization, called UBBPARAM</li> <li>• a library created manually, with a unique name</li> </ul>

---

<b>PAS</b>	Product address space. Used by the MAINVIEW products. Contains data collectors and other product functions. <i>See also</i> OS/390 product address space (PAS) <i>and</i> BBI subsystem product address space (BBI-SS PAS).
<b>performance group workload</b>	Collection of address spaces defined to OS/390 or z/OS. If you are running OS/390 or z/OS with WLM in compatibility mode, MAINVIEW for OS/390 creates a performance group workload instead of a service class.
<b>PERFORMANCE MANAGER</b>	MAINVIEW for CICS online service for monitoring and managing current performance of CICS regions.
<b>Performance Reporter (MVIMS)</b>	MVIMS Offline component that organizes data and prints reports that can be used to analyze IMS performance.
<b>Performance Reporter</b>	Product component that generates offline batch reports. The following products can generate these reports: <ul style="list-style-type: none"> <li>• MAINVIEW for DB2</li> <li>• MAINVIEW for CICS</li> </ul>
<b>Plex Manager</b>	Product through which cross-system communication, MAINVIEW security, and an SSI context are established and controlled. Plex Manager is shipped with MAINVIEW window environment products as part of the coordinating address space (CAS) and is accessible as a menu option from the MAINVIEW Selection Menu.
<b>pop-up display</b>	Full-screen panel that displays additional information about a selected event in a detail trace.
<b>pop-up window</b>	Window containing help information that, when active, overlays part of the window area. A pop-up window is displayed when you issue the HELP command while working in windows-mode.
<b>PRGP workload</b>	In MVS/SP 5.0 or earlier, or in compatibility mode in MVS/SP 5.1 or later, composite of service classes. MAINVIEW for OS/390 creates a performance group workload for each performance group defined in the current IEAIPS.xx member.

---

**procedure library** Data set consisting of members that contain executable procedures used by MAINVIEW AutoOPERATOR. These procedures are execute command lists (EXECs) that automate site functions. There can be several versions:

- the distributed parameter library, called BBPROC
- a site-specific parameter library or libraries

These can be

- a library created by AutoCustomization, called UBBPROC
- a library created manually, with a unique name

The site-created EXECs can be either user-written or customized MAINVIEW AutoOPERATOR-supplied EXECs from BBPROC.

**product address space**

*See* PAS.

**profile library**

Data set consisting of members that contain profile information and cycle refresh definitions for a terminal session connected to a BBI-SS PAS. Other members are dynamically created by MAINVIEW applications. There can be several versions:

- the distributed profile library, called BBPROF
- a site-specific profile library or libraries

These can be

- a library created by AutoCustomization, called SBBPROF
- a library created manually, with a unique name

The site library is a common profile shared by all site users. The terminal session CLIST creates a user profile automatically if one does not exist; it is called `userid.BBPROF`, where `userid` is your logon ID. User profile libraries allow each user to specify unique PF keys, CYCLE commands, target system defaults, a Primary Option Menu, and a unique set of application profiles.

**query**

One of two constituent parts of a view; the other is form. A query defines the data for a view; a form defines the display format. *See also* form, view.

**real-time data**

Performance data as it exists at the moment of inquiry. Real-time data is recorded during the smallest unit of time for data collection. *Contrast with* historical data. *See also* current data and interval data.

**Resource Analyzer**

Online real-time displays used to analyze IMS resources and determine which are affected by specific workload problems.

---

<b>Resource Monitor</b>	Online data collection services used to monitor IMS resources and issue warnings when defined utilization thresholds are exceeded.
<b>row</b>	(1) Horizontal component of a view or display comprising all the fields pertaining to a single device, address space, user, and so on. (2) Horizontal component of a DB2 table consisting of a sequence of values, one for each column of the table.
<b>RxD2</b>	Product that provides access to DB2 from REXX. It provides tools to query the DB2 catalog, issue dynamic SQL, test DB2 applications, analyze EXPLAIN data, generate DDL or DB2 utility JCL, edit DB2 table spaces, perform security administration, and much more.
<b>sample cycle</b>	Time between data samples.  For the CMF MONITOR Extractor, this is the time specified in the extractor control statements (usually 1 to 5 seconds).  For real-time data, the cycle is not fixed. Data is sampled each time you press <b>Enter</b> .
<b>sample library</b>	Data set consisting of members each of which contains one of the following items: <ul style="list-style-type: none"> <li>• sample JCL that can be edited to perform specific functions</li> <li>• macro that is referenced in the assembly of user-written services</li> <li>• sample user exit routine</li> </ul> <p>There can be several versions:</p> <ul style="list-style-type: none"> <li>• the distributed sample library, called BBSAMP</li> <li>• a site-specific sample library or libraries</li> </ul> <p>These can be</p> <ul style="list-style-type: none"> <li>• a library created by AutoCustomization, called UBBSAMP</li> <li>• a library created manually, with a unique name</li> </ul>
<b>sampler</b>	Program that monitors a specific aspect of system performance. Includes utilization thresholds used by the Exception Monitor. The CMF MONITOR Extractor contains samplers.
<b>SBBPROF</b>	<i>See</i> profile library.
<b>scope</b>	Subset of an SSI context. The scope could be all the data for the context or a subset of data within the context. It is user- or site-defined. <i>See</i> SSI context, target.

---

<b>screen definition</b>	Configuration of one or more views that have been stored with the SAVEScr command and assigned a unique name. A screen includes the layout of the windows and the view, context, system, and product active in each window.
<b>selection view</b>	In MAINVIEW products, view displaying a list of available views.
<b>service class workload</b>	<p>Collection of address spaces defined to OS/390 or z/OS. If you are running Workload Manager (WLM) in goal mode, MAINVIEW for OS/390 creates a service class workload for each service class that you define through WLM definition dialogs.</p> <p>If you are running MVS 4.3 or earlier, or MVS/SP 5.1 or later with WLM in compatibility mode, OS/390 creates a performance group workload instead of a service class. <i>See</i> performance group workload.</p>
<b>service objective</b>	Workload performance goal, specified in terms of response time for TSO workloads or turnaround time for batch workloads. Performance group workloads can be measured by either objective. Composite workload service objectives consist of user-defined weighting factors assigned to each constituent workload. For compatibility mode, neither OS/390 nor z/OS provides any way to measure service.
<b>service point</b>	<p>Specification, to MAINVIEW, of the services required to enable a specific product. Services can be actions, selectors, or views. Each target (for example, CICS, DB2, or IMS) has its own service point.</p> <p>The PLEX view lists all the defined service points known to the CAS to which the terminal session is connected.</p>
<b>service request block (SRB)</b>	Control block that represents a routine to be dispatched. SRB mode routines generally perform work for the operating system at a high priority. An SRB is similar to a task control block (TCB) in that it identifies a unit of work to the system. <i>See also</i> task control block.
<b>service select code</b>	Code entered to invoke analyzers, monitors, and general services. This code is also the name of the individual service.
<b>session</b>	Total period of time an address space has been active. A session begins when monitoring can be performed. If the product address space (PAS) starts after the job, the session starts with the PAS.
<b>SG-Auto</b>	<i>See</i> MAINVIEW SRM SG-Auto.
<b>SG-Control</b>	<i>See</i> MAINVIEW SRM SG-Control.

---

**single system image (SSI)**

Feature of the MAINVIEW window environment architecture where you can view and perform actions on multiple OS/390 or z/OS systems as though they were a single system. The rows of a single tabular view can contain rows from different OS/390 or z/OS images.

**Skeleton Tailoring Facility**

A facility in MAINVIEW AutoOPERATOR that allows skeleton JCL to be used during job submission. Skeleton JCL can contain variables within the JCL statements to be substituted with data values at job submission time. Directive statements can be used in the skeleton JCL to cause the repetition of a set of skeleton statements. This facility functions similar to the TSO skeleton tailoring facility.

**SRB** *See* service request block.

**SSI** *See* single system image.

**SSI context** Name created to represent one or more targets for a given product. *See* context, target.

**started task workload**

Address spaces running jobs that were initiated programmatically.

**statistics interval** For MAINVIEW for DB2, cumulative count within a predefined interval (30-minute default set by the DB2STATS parameter in the distributed BBPARM member BBIISP00) for an analyzer service DELTA or RATE display. Specifying the DELTA parameter displays the current value as the difference between the value sampled by the current analyzer request and the value sampled at the start of the current interval. Specifying the RATE parameter displays the current value by minute (DELTA divided by the number of elapsed minutes).

**stem variables** A REXX facility, supported in MAINVIEW AutoOPERATOR REXX EXECs and the Skeleton Tailoring Facility, where variable names end with a period followed by a number, such as &POOL.1. This configuration allows each variable to actually represent a table or array of data, with the zero variable containing the number of entries in the array. For example, &POOL.0 = 5 would indicate variables &POOL.1 through &POOL.5 exist.

**StopX37/II** *See* MAINVIEW SRM StopX37/II.

**StorageGUARD** *See* MAINVIEW SRM StorageGUARD.

**summary view** View created from a tabular view using the Summarize option in view customization. A summary view compresses several rows of data into a single row based on the summarize criteria.

---

<b>SYSPROG services</b>	Component of MAINVIEW for OS/390. Over 100 services that detect, diagnose, and correct OS/390 or z/OS system problems as they occur. Accessible from the OS/390 Performance and Control Main Menu. Note that this component is also available as a stand-alone product MAINVIEW SYSPROG Services.
<b>system resource</b>	<i>See</i> object.
<b>target</b>	Entity monitored by one or more MAINVIEW products, such as an OS/390 or z/OS image, an IMS or DB2 subsystem, a CICS region, or related workloads across systems. <i>See</i> context, scope, SSI context.
<b>target context</b>	Single target/product combination. <i>See</i> context.
<b>TASCOSTR</b>	MAINVIEW for IMS Offline program that summarizes detail and summary IMS Resource Utilization Files (IRUFs) to be used as input to the offline components.
<b>task control block (TCB)</b>	Address space-specific control block that represents a unit of work that is dispatched in the address space in which it was created. <i>See also</i> service request block.
<b>TCB</b>	<i>See</i> task control block.
<b>terminal session (TS)</b>	Single point of control for MAINVIEW products, allowing data manipulation and data display and providing other terminal user services for MAINVIEW products. The terminal session runs in a user address space (either a TSO address space or a stand-alone address space for EXCP/VTAM access).
<b>TDIR</b>	<i>See</i> trace log directory.
<b>threshold</b>	Specified value used to determine whether the data in a field meets specific criteria.
<b>TLDS</b>	<i>See</i> trace log data set.
<b>total mode</b>	Usage mode in CMFMON wherein certain columns of data reflect the cumulative value between collection intervals. Invoked by the DELta OFF command. <i>See also</i> collection interval, delta mode.
<b>trace</b>	(1) Record of a series of events chronologically listed as they occur. (2) Online data collection and display services that track transaction activity through DB2, IMS, or CICS.

---

**trace log data set (TLDS)**

Single or multiple external VSAM data sets containing summary or detail trace data for later viewing or printing. The trace log(s) can be defined as needed or dynamically allocated by the BBI-SS PAS. Each trace request is assigned its own trace log data set(s).

**trace log directory (TDIR)**

VSAM linear data set containing one entry for each trace log data set. Each entry indicates the date and time of data set creation, the current status of the data set, the trace target, and other related information.

**transaction**

Specific set of input data that initiates a predefined process or job.

**Transaction Accountant**

MVIMS Offline component that produces cost accounting and user charge-back records and reports.

**TS**

*See* terminal session.

**TSO workload**

Workload that consists of address spaces running TSO sessions.

**UAS**

*See* user address space.

**UBBPARM**

*See* parameter library.

**UBBPROC**

*See* procedure library.

**UBBSAMP**

*See* sample library.

**user address space**

Runs a MAINVIEW terminal session (TS) in TSO, VTAM, or EXCP mode.

**User BBPROF**

*See* profile library.

**view**

Formatted data within a MAINVIEW window, acquired from a product as a result of a view command or action. A view consists of two parts: query and form. *See also* form, job activity view, query.

**view definition**

Meaning of data that appears online, including source of data, selection criteria for data field inclusion and placement, data format, summarization, context, product, view name, hyperlink fields, and threshold conditions.

**view command**

Name of a view that you type on the COMMAND line to display that view.

**view command stack**

Internal stack of up to 10 queries. For each command, the stack contains the filter parameters, sort order, context, product, and time frame that accompany the view.

---

<b>view help</b>	Online help describing the purpose of a view. To display view help, place the cursor on the view name on the window information line and press <b>PF1</b> (HELP).
<b>window</b>	Area of the MAINVIEW screen in which views and resources are presented. A window has visible boundaries and can be smaller than or equal in size to the MAINVIEW window area. <i>See</i> active window, alternate window, current window, MAINVIEW window area.
<b>window information line</b>	Top border of a window. Shows the window identifier, the name of the view displayed in the window, the system, the scope, the product reflected by the window, and the tomfooleries for which the data in the window is relevant. <i>See also</i> window status field.
<b>window number</b>	Sequential number assigned by MAINVIEW to each window when it is opened. The window number is the second character in the window status field. <i>See also</i> window status field.
<b>window status</b>	One-character letter in the window status field that indicates when a window is ready to receive commands, is busy processing commands, is not to be updated, or contains no data. It also indicates when an error has occurred in a window. The window status is the first character in the window status field. <i>See also</i> window information line, window status field.
<b>window status field</b>	Field on the window information line that shows the current status and assigned number of the window. <i>See also</i> window number, window status.
<b>windows mode</b>	Display of one or more MAINVIEW product views on a screen that can be divided into a maximum of 20 windows. A window information line defines the top border of each window. <i>Contrast with</i> full-screen mode.
<b>WLM workload</b>	In goal mode in MVS/SP 5.1 and later, a composite of service classes. MAINVIEW for OS/390 creates a workload for each WLM workload defined in the active service policy.
<b>workflow</b>	Measure of system activity that indicates how efficiently system resources are serving the jobs in a workload.
<b>workload</b>	(1) Systematic grouping of units of work (for example, address spaces, CICS transactions, IMS transactions) according to classification criteria established by a system administrator. (2) In OS/390 or z/OS, a group of service classes within a service definition.
<b>workload activity view</b>	Tracks workload activity as the workload accesses system resources. A workload activity view measures workload activity in terms of resource consumption and how well the workload activity meets its service objectives.

---

**Workload Analyzer** Online data collection and display services used to analyze IMS workloads and determine problem causes.

**workload definition** Workload created through the WKLIST view. Contains a unique name, a description, an initial status, a current status, and selection criteria by which address spaces are selected for inclusion in the workload. *See* Workload Definition Facility.

**Workload Definition Facility**

In MAINVIEW for OS/390, WKLIST view and its associated dialogs through which workloads are defined and service objectives set.

**workload delay view**

Tracks workload performance as the workload accesses system resources. A workload delay view measures any delay a workload experiences as it contends for those resources.

**Workload Monitor** Online data collection services used to monitor IMS workloads and issue warnings when defined thresholds are exceeded.

**workload objectives**

Performance goals for a workload, defined in WKLIST. Objectives can include measures of performance such as response times and batch turnaround times.

---

# Index

## A

alternate form of commands 7-3

## B

BPXPRM view 3-13

## C

clearing panel 3-4

commands

available 7-3

DATARefresh 7-3

END 7-3

ENDQuery 7-3

establishing thresholds 5-19

FNEXt 7-3

FPREV 7-3

Locate 3-6

PARm 7-3

QPARm 7-3

RESet 3-4

SHOWFilt 7-3

TIME 4-3

WHERE 8-2

conventions, document xii

## D

data set, creating partitioned 5-2

data, filtering 8-1

DATARefresh command 7-3

documentation

electronic, online help xi

online xi

duration, specifying in the TIME command 4-7

dynamic fields 4-16

## E

easy menus 1-4

electronic documentation, online help xi

END command 7-3

ENDQuery command 7-3

EZUSS menu 2-4, 3-4

## F

file system views 3-10

filtering data 8-1

finding strings 3-6

FNEXt command 7-3

forms 7-2

FPREV command 7-3

FSMOUNTZ view 3-10

FSPACE view 3-11

functions, performing view 3-4

---

## H

historical data, window status indicator 4-6  
hyperlinking 3-2, 5-9

## I

information line, window 3-3  
interface, ISPF, online help xi  
interface, window 1-3  
ISPF Session Control Parameters panel 2-3

## L

L-Filter option 5-4  
Locate command 3-6  
logging on 2-2

## M

MAINVIEW window interface 1-3  
menus, easy 1-4  
MVUSS Easy Menu 2-4, 3-4

## O

online documentation xi  
online help xi

## P

panel definition, created by product  
  administrator 2-4  
panel, clearing 3-4  
PARM command 7-3  
partitioned data set, creating 5-2  
process views 3-7  
PSDELAYZ view 3-9  
PSOVERZ view 3-5, 3-8

## Q

QPARM command 7-3  
queries 7-2

## R

related documentation xi  
release notes xi  
REQSTAT view 3-12  
RESet command 3-4

## S

Session Control Parameters panel 2-3  
Set Time Frame dialog box 4-3  
SHOWFilt command 7-3  
string, finding 3-6  
Summarize option 6-2

## T

threshold  
  customization 5-18  
  setting 5-19  
TIME command  
  duration parameter 4-7  
  NEXT and PREV parameters 4-12  
  setting 4-3  
  syntax 4-3, 4-7  
time frames, over historical data intervals 4-7

## U

user views 3-16  
USROVERZ view 3-16  
USRSESSZ view 3-17

---

## V

VIEW CUSTOMIZATION facility 5-4

views

- BPXPRM 3-13
- creating your own 5-3
- file system 3-10
- FSMOUNTZ 3-10
- FSPACE 3-11
- performing functions 3-4
- process 3-7
- PSDELAYZ 3-9
- PSOVERZ 3-5, 3-8
- REQSTAT 3-12
- summary 6-1
- user 3-16
- USROVERZ 3-16
- USRSESSZ 3-17

## W

WHERE command 8-2

window 3-4

- information line 3-3
- interface 1-3
- status indicator 4-6

---

# STOP!

## IMPORTANT INFORMATION - DO NOT INSTALL THIS PRODUCT UNLESS YOU HAVE READ ALL OF THE FOLLOWING MATERIAL

By clicking the YES or ACCEPT button below (when applicable), or by installing and using this Product or by having it installed and used on your behalf, You are taking affirmative action to signify that You are entering into a legal agreement and are agreeing to be bound by its terms, EVEN WITHOUT YOUR SIGNATURE. BMC is willing to license this Product to You ONLY if You are willing to accept all of these terms. CAREFULLY READ THIS AGREEMENT. If You DO NOT AGREE with its terms, DO NOT install or use this Product; press the NO or REJECT button below (when applicable) or promptly contact BMC or your BMC reseller and your money will be refunded if by such time You have already purchased a full-use License.

### SOFTWARE LICENSE AGREEMENT FOR BMC PRODUCTS

**SCOPE.** This is a legally binding Software License Agreement ("**License**") between You (either an individual or an entity) and BMC pertaining to the original computer files (including all computer programs and data stored in such files) contained in the enclosed Media (as defined below) or made accessible to You for electronic delivery, if as a prerequisite to such accessibility You are required to indicate your acceptance of the terms of this License, and all whole or partial copies thereof, including modified copies and portions merged into other programs (collectively, the "**Software**"). "**Documentation**" means the related hard-copy or electronically reproducible technical documents furnished in association with the Software, "**Media**" means the original BMC-supplied physical materials (if any) containing the Software and/or Documentation, "**Product**" means collectively the Media, Software, and Documentation, and all Product updates subsequently provided to You, and "**You**" means the owner or lessee of the hardware on which the Software is installed and/or used. "**BMC**" means BMC Software Distribution, Inc. unless You are located in one of the following regions, in which case "BMC" refers to the following indicated BMC Software, Inc. subsidiary: (i) Europe, Middle East or Africa --BMC Software Distribution, B.V., (ii) Asia/Pacific -- BMC Software Asia Pacific Pte Ltd., (iii) Brazil -- BMC Software do Brazil, or (iv) Japan -- BMC Software K.K. **If You enter into a separate, written software license agreement signed by both You and BMC or your authorized BMC reseller granting to you the rights to install and use this Product, then the terms of that separate, signed agreement will apply and this License is void.**

**FULL-USE LICENSE.** Subject to these terms and payment of the applicable license fees, BMC grants You this non-exclusive License to install and use one copy of the Software for your internal use on the number(s) and type(s) of servers or workstations for which You have paid or agreed to pay to BMC or your BMC reseller the appropriate license fee. If your license fee entitles You only to a License having a limited term, then the duration of this License is limited to that term; otherwise this License is perpetual, subject to the termination provisions below.

**TRIAL LICENSE.** If You have not paid or agreed to pay to BMC or your BMC Reseller the appropriate license fees for a full use license, then, **NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS LICENSE:** (i) this License consists of a non-exclusive evaluation license ("Trial License") to use the Product for a limited time ("Trial Period") only for evaluation; (ii) during the Trial Period, You may not use the Software for development, commercial, production, database management or other purposes than those expressly permitted in clause (i) immediately above; and (iii) your use of the Product is on an **AS IS** basis, and **BMC, ITS RESELLERS AND LICENSORS GRANT NO WARRANTIES OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) TO YOU AND ACCEPT NO LIABILITY WHATSOEVER RESULTING FROM THE USE OF THIS PRODUCT UNDER THIS TRIAL LICENSE.** If You use this Product for other than evaluation purposes or wish to continue using it after the Trial Period, you must purchase a full-use license. When the Trial Period ends, your right to use this Product automatically expires, though in certain cases You may be able to extend the term of the Trial Period by request. Contact BMC or your BMC reseller for details.

**TERM AND TERMINATION.** This License takes effect on the first to occur of the date of shipment or accessibility to You for electronic delivery, as applicable (the "**Product Effective Date**"). You may terminate this License at any time for any reason by written notice to BMC or your BMC reseller. This License and your right to use the Product will terminate automatically with or without notice by BMC if You fail to comply with any material term of this License. Upon termination, You must erase or destroy all components of the Product including all copies of the Software, and stop using or accessing the Software. Provisions concerning Title and Copyright, Restrictions (or Restricted Rights, if You are a U.S. Government entity) or limiting BMC's liability or responsibility shall survive any such termination.

**TITLE AND COPYRIGHT; RESTRICTIONS.** All title and copyrights in and to the Product, including but not limited to all modifications thereto, are owned by BMC and/or its affiliates and licensors, and are protected by both United States copyright law and applicable international copyright treaties. You will not claim or assert title to or ownership of the Product. To the extent expressly permitted by applicable law or treaty notwithstanding this limitation, You may copy the Software only for backup or archival purposes, or as an essential step in utilizing the Software, but for no other purpose. You will not remove or alter any copyright or proprietary notice from copies of the Product. You acknowledge that the Product contains valuable trade secrets of BMC and/or its affiliates and licensors. Except in accordance with the terms of this License, You agree (a) not to decompile, disassemble, reverse engineer or otherwise attempt to derive the Software's source code from object code except to the extent expressly permitted by applicable law or treaty despite this limitation; (b) not to sell, rent, lease, license, sublicense, display, modify, time share, outsource or otherwise transfer the Product to, or permit the use of this Product by, any third party; and (c) to use reasonable care and protection to prevent the unauthorized use, copying, publication or dissemination of the Product and BMC confidential information learned from your use of the Product. **You will not export or re-export any Product without both the written consent of BMC and the appropriate U.S. and/or foreign government license(s) or license exception(s).** Any programs, utilities, modules or other software or documentation created, developed, modified or enhanced by or for You using this Product shall likewise be subject to these restrictions. BMC has the right to obtain injunctive relief against any actual or threatened violation of these restrictions, in addition to any other available remedies. Additional restrictions may apply to certain files, programs or data supplied by third parties and embedded in the Product; consult the Product installation instructions or Release Notes for details.

**LIMITED WARRANTY AND CONDITION.** If You have purchased a Full-Use License, BMC warrants that (i) the Media will be, under normal use, free from physical defects, and (ii) for a period of ninety (90) days from the Product Effective Date, the Product will perform in substantial accordance with the operating specifications contained in the Documentation that is most current at the Product Effective Date. BMC's entire liability and your exclusive remedy under this provision will be for BMC to use reasonable best efforts to remedy defects covered by this warranty

and condition within a reasonable period of time or, at BMC's option, either to replace the defective Product or to refund the amount paid by You to license the use of the Product. BMC and its suppliers do not warrant that the Product will satisfy your requirements, that the operation of the Product will be uninterrupted or error free, or that all software defects can be corrected. This warranty and condition shall not apply if: (i) the Product is not used in accordance with BMC's instructions, (ii) a Product defect has been caused by any of your or a third party's malfunctioning equipment, (iii) any other cause within your control causes the Product to malfunction, or (iv) You have made modifications to the Product not expressly authorized in writing by BMC. No employee, agent or representative of BMC has authority to bind BMC to any oral representations, warranties or conditions concerning the Product. **THIS WARRANTY AND CONDITION IS IN LIEU OF ALL OTHER WARRANTIES AND CONDITIONS. THERE ARE NO OTHER EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDING THIS LICENSE OR ANY PRODUCT LICENSED HEREUNDER. THIS PARAGRAPH SHALL NOT APPLY TO A TRIAL LICENSE.** Additional support and maintenance may be available for an additional charge; contact BMC or your BMC reseller for details.

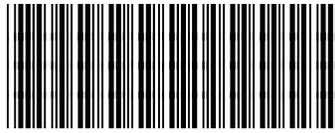
**LIMITATION OF LIABILITY.** Except as stated in the next succeeding paragraph, BMC's and your BMC reseller's total liability for all damages in connection with this License is limited to the price paid for the License. **IN NO EVENT SHALL BMC BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, PUNITIVE OR INDIRECT DAMAGES OF ANY KIND ARISING OUT OF THE USE OF THIS PRODUCT (SUCH AS LOSS OF PROFITS, GOODWILL, BUSINESS, DATA OR COMPUTER TIME, OR THE COSTS OF RECREATING LOST DATA), EVEN IF BMC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.** Some jurisdictions do not permit the limitation of consequential damages so the above limitation may not apply.

**INDEMNIFICATION FOR INFRINGEMENT.** BMC will defend or settle, at its own expense, any claim against You by a third party asserting that your use of the Product within the scope of this License violates such third party's patent, copyright, trademark, trade secret or other proprietary rights, and will indemnify You against any damages finally awarded against You arising out of such claim. However, You must promptly notify BMC in writing after first receiving notice of any such claim, and BMC will have sole control of the defense of any action and all negotiations for its settlement or compromise, with your reasonable assistance. BMC will not be liable for any costs or expenditures incurred by You without BMC's prior written consent. If an order is obtained against your use of the Product by reason of any claimed infringement, or if in BMC's opinion the Product is likely to become the subject of such a claim, BMC will at its option and expense either (i) procure for You the right to continue using the product, or (ii) modify or replace the Product with a compatible, functionally equivalent, non-infringing Product, or (iii) if neither (i) nor (ii) is practicable, issue to You a pro-rata refund of your paid license fee(s) proportionate to the number of months remaining in the 36 month period following the Product Effective Date. This paragraph sets forth your only remedies and the total liability to You of BMC, its resellers and licensors arising out of such claims.

**GENERAL.** This License is the entire understanding between You and BMC concerning this License and may be modified only in a mutually signed writing between You and BMC. If any part of it is invalid or unenforceable, that part will be construed, limited, modified, or severed so as to eliminate its invalidity or unenforceability. This License will be governed by and interpreted under the laws of the jurisdiction named below, without regard to conflicts of law principles, depending on which BMC Software, Inc. subsidiary is the party to this License: (i) BMC Software Distribution, Inc. - the State of Texas, U.S.A., (ii) BMC Software Distribution, B.V. - The Netherlands, (iii) BMC Software Asia Pacific Pte Ltd. -- Singapore (iv) BMC Software do Brazil -- Brazil, or (v) BMC Software K.K. -- Japan. Any person who accepts or signs changes to the terms of this License promises that they have read and understood these terms, that they have the authority to accept on your behalf and legally obligate You to this License. Under local law and treaties, the restrictions and limitations of this License may not apply to You; You may have other rights and remedies, and be subject to other restrictions and limitations.

**U.S. GOVERNMENT RESTRICTED RIGHTS.** UNPUBLISHED -- RIGHTS RESERVED UNDER THE COPYRIGHT LAWS OF THE UNITED STATES. Use, duplication, or disclosure by the U.S. Government is subject to restrictions set forth in FAR Section 52.227-14 Alt. III (g)(3), FAR Section 52.227-19, DFARS 252.227-7014 (b) or DFARS 227.7202, as amended from time to time. Contractor/Manufacturer is BMC Software, Inc., 2101 CityWest Blvd., Houston, TX 77042-2827, USA. Any contract notices should be sent to this address.

# Notes



\*100042444\*