

MAINVIEW[®] for OS/390

Customization Guide

Version 2.7

March 31, 2003



Copyright 2003 BMC Software, Inc. 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 trademarks belong to their respective companies.

BMC Software considers information included in this documentation to be proprietary and confidential. Your use of this information is subject to the terms and conditions of the applicable End User License Agreement for the product and the proprietary and restricted rights notices included in this documentation.

Restricted Rights Legend

U.S. Government Restricted Rights to Computer Software. UNPUBLISHED -- RIGHTS RESERVED UNDER THE COPYRIGHT LAWS OF THE UNITED STATES. Use, duplication, or disclosure of any data and computer software by the U.S. Government is subject to restrictions, as applicable, set forth in FAR Section 52.227-14, DFARS 252.227-7013, DFARS 252.227-7014, DFARS 252.227-7015, and DFARS 252.227-7025, 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.

Contacting BMC Software

You can access the BMC Software Web site at <http://www.bmc.com>. From this Web site, you can obtain information about the company, its products, corporate offices, special events, and career opportunities.

United States 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 United States 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.”

Support Web Site

You can obtain technical support from BMC Software 24 hours a day, 7 days a week at <http://www.bmc.com/support.html>. From this Web 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 by Telephone or E-mail

In the United States and Canada, if you need technical support and do not have access to the Web, call 800 537 1813. Outside the United States 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.

Before Contacting BMC Software

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

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

Contents

About This Book	xiii
Chapter 1	Migration Considerations
	Conversion of All Views to Use Central Thresholds 1-2
	Duplicate Views between CMF MONITOR and MAINVIEW for OS/390 1-2
	Summarization Type SUM Eliminated from Views 1-2
	Create a New PARMFILE 1-3
	View Changes in Version 2.7.00 1-3
	LPARSTAT and LPARTOT Changes 1-4
Chapter 2	Post-Installation Tasks: Manually Customizing MAINVIEW for OS/390
	Overview 2-2
	Creating the OS/390 PAS Startup Procedure (Required) 2-2
	Required SSID Parameter 2-3
	Sample Instructions 2-4
	Understanding the OS/390 PAS JCL Statements 2-11
	Copying Exception Monitor Members (Required) 2-15
	Specifying the Extractor Operating Environment (Required) 2-16
	Activating CSMON Data Collection (Optional) 2-17
	Copying Sample Screen Definitions (Optional) 2-18
	Copying Optional Members into UBBPARM (Optional) 2-18
	Authorizing SYSPROG Services in TSO Line Mode (Optional) 2-19
	Controlling Job Step Data Collection (Optional) 2-20
	Setting Up Long-Term History Data Collection (Optional) 2-21
	What Next? 2-23
Chapter 3	Setting Up the Exception Monitor
	Understanding the Exception Monitor 3-2
	How the Exception Monitor Knows What to Monitor 3-2
	Starting the Exception Monitor 3-4
	Automatically Starting the Exception Monitor 3-4
	Manually Starting and Stopping the Exception Monitor 3-5

Chapter 4	Defining Workloads and Service Objectives	
	Overview	4-2
	Advantages of Creating Your Own Workloads	4-2
	Deciding Which Workloads to Define	4-3
	Workloads You Can Define	4-3
	Workloads Created for You.	4-4
	Selecting Only the Jobs You Want	4-5
	Creating Workload Definitions	4-6
	Characterizing Workloads	4-9
	Valid Commands	4-10
	Characterizing ASCH Workloads	4-11
	Characterizing Batch Workloads	4-12
	Characterizing OMVS Workloads	4-14
	Characterizing Started Task Workloads	4-16
	Characterizing TSO Workloads	4-17
	Characterizing Composite Workloads	4-19
	Characterizing Performance Group (PGRP) Workloads	4-22
	Setting Service Objectives	4-23
	Service Objectives for Workloads	4-25
	Service Objectives for Batch Workloads	4-26
	TSO Workload Service Objectives	4-28
	Checking the Results	4-30
	Examples	4-32
	Example 1: Creating a TSO Workload	4-32
	Example 2: Creating a Batch Workload	4-38
	Example 3: Creating a Composite Workload	4-44
Chapter 5	Security	
	Protecting Views and Actions	5-2
	Protecting CSMON and SYSPROG Services	5-3
	Using the BBX SAF Interface	5-4
	Securing SYSPROG and CSMON by Using the MAINVIEW Security Interface	5-5
	Securing SYSPROG Services from Outside the MAINVIEW Environment	5-12
Chapter 6	Maintaining Workload Definitions	
	Describing Workload Management Tasks	6-2
	Changing Name, Description, and Current Status	6-2
	Deleting a Workload Definition	6-3
	Updating a Workload Definition	6-4

Chapter 7	Maintaining the Exception Monitor	
	Displaying the Exception Monitor Member List	7-2
	Creating Control Statement Members	7-3
	Deleting a Control Statement Member	7-6
	Changing the Exception Monitor Interval	7-6
	Displaying the List of Active Samplers	7-7
	Updating a Control Statement Member	7-9
	Adding a Sampler to a Member	7-10
	Setting New Thresholds for a Sampler	7-11
Appendix A	Function Codes for Single-Node SAF Resource Rules	
Glossary		
Index		

Figures

Figure 2-1	Example of the Instructions in BBILIB Member BBMPAS (Part 1 of 4)	2-4
Figure 2-2	Example of the Instructions in BBILIB Member BBMPAS (Part 2 of 4)	2-6
Figure 2-3	Example of the Instructions in BBILIB Member BBMPAS (Part 3 of 4)	2-8
Figure 2-4	Example of the Instructions in BBILIB Member BBMPAS (Part 4 of 4)	2-10
Figure 2-5	Control Statements for Long-Term Data Collection	2-22
Figure 3-1	EMSTAT View	3-5
Figure 3-2	Exception Monitor Member List	3-6
Figure 4-1	Sample Composite Workload for DB2-Related Address Spaces	4-3
Figure 4-2	WKLIST View	4-6
Figure 4-3	Creating a Workload Definition Using the Add Workload Panel	4-7
Figure 4-4	Workload Panel Field Values	4-9
Figure 4-5	Characterize Batch Workload Panel with Sample Values	4-10
Figure 4-6	Characterize ASCH Workload Panel	4-11
Figure 4-7	Filling In Fields for the Characterize Batch Workload Panel	4-13
Figure 4-8	Characterize OMVS Workload Panel	4-15
Figure 4-9	Characterize STC Workload Panel	4-16
Figure 4-10	Characterize TSO Workload Panel	4-18
Figure 4-11	Characterize Composite Workload Panel	4-20
Figure 4-12	Add a Workload to a Composite Workload	4-21
Figure 4-13	Characterize Performance Group (PGRP) Workload	4-23
Figure 4-14	Service Objective Type Panel	4-26
Figure 4-15	Specify Batch Service Objective Panel for ALLBAT	4-26
Figure 4-16	Specify TSO Service Objective Panel for ALLTSO	4-28
Figure 4-17	WOBJ View	4-30
Figure 4-18	WOBJ View Accessed Using MAINVIEW Explorer	4-31
Figure 4-19	Add Workload Panel	4-32
Figure 4-20	Completed Add Workload Panel	4-33
Figure 4-21	Characterize TSO Workload Panel for ACCTTSO	4-34
Figure 4-22	Completed Characterize TSO Workload Panel	4-35
Figure 4-23	TSO Service Objective Specification Panel	4-36

Figure 4-24	WKLIST View Showing ACCTTSO	4-37
Figure 4-25	Add Workload Panel to Create a Batch Workload	4-38
Figure 4-26	Add Workload Panel for ACCTCLSA	4-39
Figure 4-27	Characterize Batch Workload Panel for ACCTCLSA	4-39
Figure 4-28	Completed Characterize Batch Workload Panel	4-41
Figure 4-29	Specify Batch Service Objective Panel	4-41
Figure 4-30	WKLIST View with a Newly Created Workload	4-43
Figure 4-31	WKLIST View after Creating Several New Workloads	4-44
Figure 4-32	Create a Composite Workload Using Add Workload Panel	4-45
Figure 4-33	Add Workload Panel for ACCTALL	4-45
Figure 4-34	Characterize Composite Workload Panel for ACCTALL	4-46
Figure 4-35	Composite Workload Characterization Panel	4-47
Figure 4-36	Add a Workload into ACCTALL	4-48
Figure 4-37	All Selected Workloads for ACCTALL	4-49
Figure 4-38	WKLIST View with ACCTALL	4-50
Figure 5-1	SERDEF View for Default (00) Member	5-6
Figure 5-2	Disabling Security for the MV390 Primary Action—CSMON Resource	5-7
Figure 5-3	Disabling the MV390 Primary Action—CSMON Resource	5-8
Figure 5-4	Issuing the CHAnge Command in the SERDEF View	5-9
Figure 5-5	Change Resource Authorization Definition Panel	5-10
Figure 5-6	Changing a MAINVIEW Resource Entity Name	5-11
Figure 6-1	Confirm Delete Workload Panel	6-3
Figure 7-1	Exception Monitor - Member List Panel	7-2
Figure 7-2	Sampler Selection Panel	7-4
Figure 7-3	ENQ Sampler Information Panel	7-5
Figure 7-4	Using Exception Monitor Member List to Display Samplers	7-7
Figure 7-5	Active Samplers Panel	7-8
Figure 7-6	Exception Monitor Sampler List	7-9
Figure 7-7	Sampler Selection Panel for PWSCPMCB	7-10

Tables

Table 2-1	Extractor JCL Statements and Parameters	2-11
Table 2-2	Sample Members to Copy into CMFCPM00	2-17
Table 4-1	Characterizing Different Types of Workloads	4-8
Table 4-2	Service Objectives for Different Types of Workloads	4-24
Table 6-1	Tasks Performed from the WKLIST View	6-2
Table 7-1	Exception Monitor Member List Tasks	7-3
Table A-1	COMMON STORAGE MONITOR Services	A-1
Table A-2	Commands (Common Storage Summary Panel)	A-2
Table A-3	Commands (Common Storage Areas Panel)	A-2

About This Book

This book describes how to complete the installation procedure that you began in the *MAINVIEW[®] Common Customization Guide*. While the *MAINVIEW Common Customization Guide* describes how to complete the tasks that pertain to all MAINVIEW products, this book addresses those tasks that are unique to the MAINVIEW for OS/390 product.

Throughout this book, references to OS/390 support also include support for MVS and z/OS.

Who Should Read This Book

This book is intended for the MAINVIEW for OS/390 product administrator only.

How This Book Is Organized

This book is organized as follows. In addition, this book contains a glossary of terms and an index.

Chapter/Appendix	Description
Chapter 1, "Migration Considerations"	describes some tasks you should perform if you are migrating from an earlier MAINVIEW for OS/390 version
Chapter 2, "Post-Installation Tasks: Manually Customizing MAINVIEW for OS/390"	documents the final manual customization steps in the process begun in the <i>MAINVIEW Common Customization Guide</i>
Chapter 3, "Setting Up the Exception Monitor"	describes steps for setting up the Exception Monitor

Chapter/Appendix	Description
Chapter 4, "Defining Workloads and Service Objectives"	explains how to define and use workloads for maximum efficiency
Chapter 5, "Security"	describes how to protect various components in MAINVIEW for OS/390
Chapter 6, "Maintaining Workload Definitions"	explains how to manage workload definitions after they have been defined
Chapter 7, "Maintaining the Exception Monitor"	explains how to maintain a control statement member (a collection of one or more samplers) to use with the Exception Monitor
Appendix A, "Function Codes for Single-Node SAF Resource Rules"	provides supplemental information about SYSPROG and COMMON STORAGE MONITOR services

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 OS/390 generates are available in an MVS data set that is downloaded during installation. For each message, the data set includes an explanation and suggests a user response. The MVS data set is called *HLQ.MSGS* (where *HLQ* is the high-level qualifier that is specified during installation).

In addition to this book and the Help, you can find useful information in the publications listed in the following table. As "Online and Printed Books" on page xv explains, these publications are available on request from BMC Software.

Category	Document	Description
Installation documents	<i>MAINVIEW Installation Requirements Guide</i>	explains how to download the MAINVIEW for OS/390 product tape components, receive, apply, and accept product libraries, and access AutoCustomization
Core documents	<i>MAINVIEW Common Customization Guide</i>	describes how to customize the product manually; includes common steps for all MAINVIEW products
	<i>MAINVIEW Administration Guide</i>	includes administrative procedures

Category	Document	Description
Supplemental documents	<i>MAINVIEW for OS/390 User Guide and Reference</i>	describes the features and functions in MAINVIEW for OS/390, and contains information about the data that you can gather with the Exception Monitor
	<i>MAINVIEW for OS/390 Release Notes</i>	describe new and changed features
	<i>MAINVIEW AutoOPERATOR™ Solutions Guide</i>	contains information about setting up MAINVIEW AutoOPERATOR solutions to work with Exception Monitor messages
	<i>MAINVIEW SYSPROG Services User Guide and Reference</i>	provides information about the System Programmer (SYSPROG) services
	<i>Implementing Security for MAINVIEW Products</i>	provides information about securing specific views and services

Online and Printed Books

The books that accompany BMC Software products are available in online and printed formats. Online books are formatted as Portable Document Format (PDF) files. Some online books are also formatted as HTML files.

To Access Online Books

To view any online book that BMC Software offers, visit the Customer Support page of the BMC Software Web site at http://www.bmc.com/support_home. You can also access PDF books from the documentation compact disc (CD) that accompanies your product.

Use the free Acrobat Reader from Adobe Systems to view, print, or copy PDF files. In some cases, installing the 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 Request Additional Printed Books

BMC Software provides some printed books with your product order. To request additional books, go to http://www.bmc.com/support_home.

Online Help

The MAINVIEW for OS/390 product includes online Help. In the MAINVIEW for OS/390 ISPF interface, 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). The latest versions of the release notes and other notices are available on the Web at http://www.bmc.com/support_home.

General 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 END to return to WKLIST.
specific (standard) keyboard key names	bolded and in Times 10 pt. font	Press Enter .
field names	bolded and in Times 10 pt. font	In the Initial status field, type one of the following values.
directories, file names, Web addresses, e-mail addresses, option names	bolded and in Times 10 pt. font	The BMC Software home page is at www.bmc.com .
commands, view names, nonspecific key names, keywords, parameters	every letter capitalized	Use the TIME command to specify the current time and date. Display the EMSTAT view. Use the HELP function key.
commands that can be shortened	required letters capitalized; other letters in lowercase	Used with the CONtext command.
code examples, syntax statements, system messages, screen text	Courier font	//PARMLIB DD DSN= <i>hi level</i> .UBBPARM, SAVE THIS MEMBER IN A PROCLIB AND CONTINUE ON TO THE NEXT STEP.
emphasized words, new terms, variables	italics	When finished, perform <i>one</i> of the following tasks. A <i>view table</i> is a family of views that display the same type of data.

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 information that might improve product performance or that might make procedures easier to follow.

Special Characters

This book uses the following special characters in MAINVIEW command notation:

Item	Use	Example
. (period)	used to direct a command to a specific window without changing the default window specification	W2.VIEWS
; (semicolon)	used to separate two or more independent commands	VIEWS;W3;JFLOW;ASU
? (question mark)	used as a wildcard character for a single character	W3;JFLOWS LGS?2
* (asterisk)	used with the CONtext command to specify the system to which you are currently connected used with the TIME command to specify the current time or date (or both)	CONtext * MVMVS TIME * *
= (equal sign)	used with the CONtext command to specify the system currently active in the window used with the TIME command to retain the time or date (or both) set by a previously issued TIME command	CONtext = = TIME = =

Chapter 1 Migration Considerations

This chapter lists points to consider as you migrate from an older version of MAINVIEW for OS/390 to a newer version. This chapter includes the following topics:

Conversion of All Views to Use Central Thresholds	1-2
Duplicate Views between CMF MONITOR and MAINVIEW for OS/3901-2	
Summarization Type SUM Eliminated from Views	1-2
Create a New PARMFILE	1-3
View Changes in Version 2.7.00	1-3
LPARSTAT and LPARTOT Changes	1-4

Conversion of All Views to Use Central Thresholds

Central thresholds are defined once for all references to a field. Central thresholds are saved as a member in the PAS parameter library, UBBPARM. The member name is $BBpArrr$, where p is the product identifier and $rrrr$ is the internal record identifier. If you create a new threshold for the same data field, it will automatically replace the existing member.

For more information about central thresholds, see *Using MAINVIEW* and the *MAINVIEW Administration Guide*.

Duplicate Views between CMF MONITOR and MAINVIEW for OS/390

Starting with version 2.7.00 of MAINVIEW for OS/390, duplicate views are no longer shared by CMF MONITOR and MAINVIEW for OS/390. Except for SYSOVER and SYSOVERZ, which are still shared by both products, all view names are unique.

Summarization Type SUM Eliminated from Views

Virtually all summarization types of SUM within views have been eliminated in version 2.7.00. Those users who found this summarization type useful can customize a view, bearing in mind that the view should not be used across intervals, but just used across contexts.

Create a New PARMFILE

You need to create a new PARMFILE data set because the format of the PARMFILE has changed. Use AutoCustomization or, for manual customization, follow the instructions for creating an MVS PAS PARMFILE data set in Step 22 of the *MAINVIEW Common Customization Guide*.

If you do not create a new PARMFILE, MAINVIEW for OS/390 will not be able to correctly read the old workload definitions in the PARMFILE, resulting in the following problems:

- The error message `BBMZC012E Component module 'BBM9DIW1' failed` will appear.
- Data Collection will fail to initialize in the PAS.

View Changes in Version 2.7.00

In version 2.7.00, virtually every view in the MAINVIEW for OS/390 product has been changed. These changes fall into several categories:

- New data was added to views, and various other changes (such as centralized thresholds) were implemented.
- A new record was added to all views to make it possible to use the same views with multiple products (CMF MONITOR and MAINVIEW for OS/390).
- All of the device views have had their parameters changed.

In previous releases, the device number was always the first parameter for these views, and only one of the views accepted the VOLSER as a parameter.

In version 2.7.00, all of the views have the VOLSER as the first parameter. The second parameter is now the device number, and any other parameters have become 3, 4, 5, and so on.

Note: You have two alternatives if you have currently existing user-customized views:

- Recustomize the views. (This approach is the best alternative, but it is not always practical.)
- Change the hyperlinks within the product-distributed views to remove the word FORM from the hyperlink. This procedure should allow most user views to work, although it will refresh the data when you hyperlink.

LPARSTAT and LPARTOT Changes

MAINVIEW for OS/390 version 2.6.00 introduced changes to the LPARSTAT view that created a Totals line. These changes have now been incorporated into the LPARTOT view instead, and LPARSTAT now appears as it did prior to the change made in version 2.6.00.

For additional information about these views, see the online help for LPARSTAT and LPARTOT.

Chapter 2 Post-Installation Tasks: Manually Customizing MAINVIEW for OS/390

This chapter tells you how to complete the last steps in the manual customization process that you started in the *MAINVIEW Common Customization Guide*.

Note: *If you installed MAINVIEW for OS/390 by using AutoCustomization, you can skip this chapter.*

If you did not install MAINVIEW for OS/390 by using AutoCustomization, be sure that you complete the procedures in this chapter even if you have already customized CMF MONITOR. Although the procedures in the following sections look similar to two steps in the CMF MONITOR customization procedure, the members and screens that are copied are actually quite different.

This chapter includes the following topics:

Overview	2-2
Creating the OS/390 PAS Startup Procedure (Required)	2-2
Copying Exception Monitor Members (Required)	2-15
Specifying the Extractor Operating Environment (Required)	2-16
Activating CSMON Data Collection (Optional)	2-17
Copying Sample Screen Definitions (Optional)	2-18
Copying Optional Members into UBBPARM (Optional)	2-18
Authorizing SYSPROG Services in TSO Line Mode (Optional)	2-19
Controlling Job Step Data Collection (Optional)	2-20
What Next?	2-23

Overview

The following customization steps (which are unique to MAINVIEW for OS/390) are *required*:

- creating the OS/390 PAS startup procedure
- copying sample Exception Monitor members to UBBPARM
- specifying the Extractor operating environment

The following customization steps (which are unique to MAINVIEW for OS/390) are *optional*:

- activating COMMON STORAGE MONITOR data collection
- copying sample screen definitions to SBBSDEF
- copying optional parameters into UBBPARM
- authorizing SYSPROG to run in a TSO environment
- controlling job step data collection

Creating the OS/390 PAS Startup Procedure (Required)

Note: If you created the OS/390 Product Address Space (PAS) when you installed MAINVIEW for OS/390, you do not need to complete the steps in this section.

If you are customizing any of the parameters, review this section and use the information shown in the following figures:

- Figure 2-1 on page 2-4
- Figure 2-2 on page 2-6
- Figure 2-3 on page 2-8
- Figure 2-4 on page 2-10

To start the OS/390 PAS, you must create a procedure in your system PROCLIB and execute the procedure under the following circumstances:

- There should be one OS/390 PAS executing per OS/390 image.
- The recommended dispatching priority of the OS/390 PAS is 255.

This section creates a procedure for starting the OS/390 PAS, which is used by both MAINVIEW for OS/390 and CMF MONITOR, and provides instructions for defining the OS/390 PAS to start during IPL.

Required SSID Parameter

Note: When creating the PAS proc, you must define the same subsystem name in the SSID subparameter as defined for the CAS in the CAS proc. (See the *MAINVIEW Common Customization Guide* for more information.) The SSID value is used by the PAS during initialization to identify the CAS to which it is to connect.

To create the OS/390 PAS procedure, follow these steps:

Step 1 Copy BBILIB member BBMPAS, shown in Figure 2-1 on page 2-4 and Figure 2-3 on page 2-8, to SYS1.PROCLIB or to another system procedure library.

Step 2 Follow the instructions at the top of the member to modify the procedure for your site requirements.

Note: See Table 2-1 on page 2-11 for an explanation of the DD statements; see Figure 2-3 on page 2-8 for an explanation of the PROC statement parameters.

Step 3 (*optional*) Add the following START command to member COMMND xx to define the OS/390 PAS to your IPL procedure, so that the PAS starts at system initialization:

```
COM='S procName'
```

where *procName* is the name of the OS/390 PAS started task procedure.

BMC Software recommends that you modify SYS1.PARMLIB member COMMND xx to define the OS/390 PAS to initialize at IPL. The COMMND xx member contains OS/390 commands that are issued by the master scheduler upon system initialization.

Note: Commands are issued in the order in which they appear in COMMND xx . The OS/390 PAS START command must occur after the CAS START command. See the *MAINVIEW Common Customization Guide* for more information about defining the CAS proc.

If you do not define the OS/390 PAS to start at IPL, see the *MAINVIEW Administration Guide* for instructions about manually issuing a START command for the PAS.

Sample Instructions

This section contains examples of the instructions in the BBILIB member BBMPAS.

Figure 2-1 Example of the Instructions in BBILIB Member BBMPAS (Part 1 of 4)

```

//*-----MVS PRODUCT ADDRESS SPACE (PAS) STARTED TASK PROCEDURE-----
//*
//* INSTRUCTIONS:
//*
//* - CHANGE ?BBCHILV TO THE HIGH-LEVEL QUALIFIER OF THE
//*   PRODUCT LIBRARIES.
//*
//* - CHANGE ?BAVSHLQ TO THE HIGH-LEVEL QUALIFIER ASSIGNED TO
//*   VSAM DATA SETS (THE DATA SETS DEFINED BY THE PARMFILE
//*   AND HISTDSXX DDNAMES).
//*
//* - IF BBLINK IS NOT IN THE LINK-LIST CONCATENATION THEN CHANGE
//*   ?BBLINK TO THE HIGH-LEVEL QUALIFIER ASSIGNED TO THE BBLINK
//*   DATA SET. OTHERWISE DELETE THE //STEPLIB DD AND
//*   //BBLINK='?BBLINK' DD STATEMENTS.
//*
//* - IF THE PRODUCTS THAT YOU ARE RUNNING DO NOT USE THE BMC PRODUCT
//*   AUTHORIZATION FACILITY THEN DELETE THE //BMCPSWD DD STATEMENT.
//*   OTHERWISE CHANGE ?PSWDDSN TO THE NAME OF THE BMC PRODUCT
//*   AUTHORIZATION (PASSWORD) DATA SET.
//*
//* - IF SAF SECURITY IS NOT USED IN THIS ENVIRONMENT THEN DELETE
//*   THE //BBSECURE DD STATEMENT. OTHERWISE CHANGE ?BBSECUR TO THE
//*   NAME THAT YOU ASSIGNED TO THE BBSECURE DATA SET.
//*
//* - CHANGE ?BBSYSOUT TO AN ACCEPTABLE SYSOUT CLASS FOR STARTED
//*   TASKS.
//*
//* - CHANGE ?UBBPARM TO THE NAME YOU ASSIGNED TO THE USER
//*   PARAMETER LIBRARY DEFINED BY THE PARMLIB DD STATEMENT.
//*
//* - CHANGE ?SSID TO THE NAME YOU ASSIGNED TO THE CAS THAT THIS
//*   PRODUCT ADDRESS SPACE IS TO CONNECT TO. FOR MORE INFORMATION,
//*   PLEASE REFER TO THE DESCRIPTION OF SSID IN THE PARAMETER
//*   NOTES BELOW.
//*
//* - IF YOU HAVE NOT ALLOCATED ANY HISTORICAL DATA SETS, DELETE
//*   THE HISTDXX DD STATEMENTS.
//*

```

Figure 2-1 Example of the Instructions in BBILIB Member BBMPAS (Part 1 of 4), continued

```
/** - LEAVE THE SYSID= PARAMETER BLANK.  THE SYSID IS USED TO SEGREGATE
/** DATA SETS THAT CANNOT BE SHARED BETWEEN MVS IMAGES.  THE SYSID IS
/** USED AS PART OF THE DATA SET QUALIFIER FOR THESE DATA SETS.  WHEN
/** THIS PARAMETER IS LEFT BLANK, THE SYSID MUST BE SPECIFIED AS PART
/** OF THE MVS START COMMAND.
/**
/** *WARNING* IF YOU SPECIFY A SYSID IN THIS PROC, MAKE CERTAIN THAT
/** THIS PROC IS STARTED ONLY ON THE MVS IMAGE WITH A
/** MATCHING SYSID.
/**
/** - PUT AN ENTRY IN THE CHANGE LOG BELOW TO INDICATE WHEN THIS MEMBER
/** WAS ALTERED.
/**
/** SAVE THIS MEMBER IN A PROCLIB AND CONTINUE ON TO THE NEXT STEP.
/**
/** END OF INSTRUCTIONS.
/**
/**-----
/**
/** CHANGE LOG:
/**
/**      CREATED BY ?USER ON ?DATE AT ?TIME.
/**
/**-----
/**
/** NOTE: ANY REGION SIZE GREATER THAN 16 MEGS AND LESS THAN
/**      32 MEGS CAUSES MVS TO MAKE AVAILABLE ALL STORAGE BELOW
/**      THE 16 MEG LINE AND 32 MEGS OF STORAGE (THE IBM DEFAULT)
/**      ABOVE THE LINE.
/**
```

Figure 2-2 Example of the Instructions in BBILIB Member BBMPAS (Part 2 of 4)

```

//*-----
//*
//MVSPAS  PROC  XDM=N,DC=START,
//          CPM=00,
//          CMDID=,
//          IPM=STOP,
//          XDS=00,
//          EM=00,
//          CXEN=Y,
//          SSID=?SSID,
//          SYSID=,
//          BBCHILV='?BBCHILV',
//          BAVSHLQ='?BAVSHLQ',
//          UBBPARAM='?UBBPARM',
//          BBLINK='?BBLINK',
//          PSWDDSN='?PSWDDSN',
//          BBSOUT='?BBSYSOUT',
//          RGN=32
//*
//PAS      EXEC  PGM=BBM9DA00,
//          PARM=( ' SSID=&SSID,CXEN=&CXEN',
//          ' XDM=&XDM,DC=&DC,CMDID=&CMDID',
//          ' CPM=&CPM,IPM=&IPM,XDS=&XDS,EM=&EM' ),
//          REGION=&RGN.M,
//          TIME=1440
//*
//STEPLIB DD  DISP=SHR,DSN=&BBLINK
//*
//CMFCPM1 DD  DUMMY
//CMFIPM1 DD  DUMMY
//CMFDUMP DD  SYSOUT=&BBSOUT
//CMFLOG  DD  SYSOUT=&BBSOUT
//CMFMSG  DD  SYSOUT=&BBSOUT
//CMFXDSL DD  SYSOUT=&BBSOUT
//USSDUMP DD  SYSOUT=&BBSOUT
//*
//* EXTRACTOR OPERATING PARAMETERS.
//*
//PARMLIB DD  DISP=SHR,DSN=&UBBPARM
//          DD  DISP=SHR,DSN=&BBCHILV..BBPARAM
//          DD  DISP=SHR,DSN=&BBCHILV..BBPARAM
//*
//BBSECURE DD  DISP=SHR,DSN=?BBSECUR
//*
//* PASSWORD LIBRARY
//*
//BMCPSWD DD  DISP=SHR,DSN=&PSWDDSN
//*

```

Figure 2-2 Example of the Instructions in BBILIB Member BBMPAS (Part 2 of 4), continued

```
//* VIEW DEFINITIONS .
//*
//BBVDEF DD DISP=SHR,DSN=&BBCHILV..BBVDEF
//*
//* ACTION DEFINITION TABLES .
//*
//BBACTDEF DD DISP=SHR,DSN=&BBCHILV..BBACTDEF
//*
//* HISTORICAL PROCESSING AND WORKLOAD CONFIGURATION DEFINITIONS .
//*
//PARMFILE DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..PARMFILE
//*
//* HISTORY DATA SETS .
//*
//* - THESE DATA SET DEFINITIONS MAY BE DELETED IF YOU HAVE NOT
//* DEFINED THEM IN A PREVIOUS STEP .
//*
//HISTDS00 DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..HISTDS00
//HISTDS01 DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..HISTDS01
//HISTDS02 DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..HISTDS02
//*
//HST1DS00 DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..HST1DS00
//HST1DS01 DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..HST1DS01
//HST1DS02 DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..HST1DS02
//*
```

Figure 2-3 Example of the Instructions in BBILIB Member BBMPAS (Part 3 of 4)

```

//*****
//*
//* PARAMETER NOTES:
//*
//* SSID - XXXX          (THIS PARAMETER HAS NO DEFAULT VALUE)
//*
//*          SPECIFIES THE SUBSYSTEM ID USED TO IDENTIFY THE MAINVIEW
//*          COORDINATING ADDRESS SPACE (CAS).  THIS PAS USES THE SSID
//*          PARAMETER TO CONNECT TO THE CORRECT CAS, SO THE SAME VALUE
//*          MUST BE SPECIFIED BOTH FOR THIS SSID PARAMETER AND FOR THE
//*          CAS SSID PARAMETER.
//*
//*
//* XDM  - N|Y          (THE DEFAULT IS XDM=N)
//*
//*          SPECIFIES WHETHER OR NOT THE PAS IS TO EXECUTE IN
//*          EXTENDED DIAGNOSTIC MODE.
//*
//*          DIAGNOSTIC MODE WILL CAUSE A NUMBER OF ADDITIONAL
//*          MESSAGES TO BE GENERATED AND IS NOT RECOMMENDED FOR
//*          NORMAL OPERATION.
//*
//*
//* DC   - START|STOP  (THE DEFAULT IS DC=START)
//*
//*          INDICATES WHETHER OR NOT OS/390 DATA COLLECTORS SHOULD
//*          BE STARTED.
//*
//*          NOTE:  THIS PARAMETER DOES NOT CONTROL THE CMF EXTRACTOR.
//*
//*
//* CPM  - XX          (THE DEFAULT IS CPM=00)
//*
//*          SPECIFIES THE SUFFIX OF THE CMFCPMXX CONTROL STATEMENT
//*          MEMBER YOU WANT THE CMF EXTRACTOR TO USE.
//*
//*          CMF CONTROL STATEMENT MEMBERS ARE STORED IN THE PARAMETER
//*          LIBRARY ALLOCATED BY THE DDNAME PARMLIB.  A SAMPLE SET OF
//*          CONTROL STATEMENTS FOR THE CMF EXTRACTOR SAMPLERS COMMONLY
//*          USED IN CPM MODE IS LOCATED IN THE CMFCPM00 MEMBER OF THE
//*          HILEVEL.BBPARM LIBRARY.
//*
//*

```

Figure 2-3 Example of the Instructions in BBILIB Member BBMPAS (Part 3 of 4), continued

```
//* *
//* IPM - XX|STOP (THE DEFAULT IS IPM=STOP) *
//* *
//* SPECIFIES THE SUFFIX OF THE CMFIPMXX CONTROL STATEMENT *
//* MEMBER YOU WANT THE CMF EXTRACTOR TO USE WHEN RUNNING *
//* IN IPM MODE. CHANGE THIS TO THE IPM MEMBER THAT YOU WANT *
//* TO START. IF NO IPM MEMBER IS TO BE USED, THE VALUE OF *
//* THIS PARAMETER SHOULD REMAIN IPM=STOP (THE DEFAULT VALUE). *
//* *
//* CMF CONTROL STATEMENT MEMBERS ARE STORED IN THE PARAMETER *
//* LIBRARY ALLOCATED BY THE DDNAME PARMLIB. A SAMPLE SET OF *
//* CONTROL STATEMENTS FOR THE CMF EXTRACTOR SAMPLERS COMMONLY *
//* USED IN IPM MODE IS LOCATED IN THE CMFIPM00 MEMBER OF THE *
//* HILEVEL.BBPARM LIBRARY. *
//* *
//* *
//* XDS - XX|STOP (THE DEFAULT IS XDS=00) *
//* *
//* NOTE: THIS PARAMETER IS ONLY USED IN CMF 5.2.1 OR LATER. *
//* IT IS IGNORED IN EARLIER RELEASES OF CMF. *
//* *
```

Figure 2-4 Example of the Instructions in BBILIB Member BBMPAS (Part 4 of 4)

```

//*
//* SPECIFIES THE SUFFIX OF THE CMFXDSXX CONTROL STATEMENT
//* MEMBER YOU WANT THE CMF MONITOR TO USE WHEN STARTING
//* THE CMF CROSS-SYSTEM DATA SERVER FACILITY (XDS). TO
//* START XDS, CHANGE THIS TO THE XDS MEMBER THAT YOU WANT
//* TO START.
//*
//* IF XDS IS NOT DESIRED, THE VALUE OF THIS PARAMETER MAY
//* BE SET TO XDS=STOP.
//*
//* AS SHIPPED, THE DEFAULT OF XDS=00 CAUSES THE CX10XDGS
//* API TO BE AVAILABLE, BUT DOES NOT BUFFER ANY SMF
//* RECORDS FOR THE CX10XDQY/CX10XDRC APIS TO ACCESS.
//*
//* THIS VALUE MAY BE CHANGED AT RUNTIME VIA THE MVS MODIFY(F)
//* COMMAND. E.G. 'F MVSPAS,XDS=01'
//*
//* XDS CONTROL STATEMENT MEMBERS ARE STORED IN THE PARAMETER
//* LIBRARY ALLOCATED TO THE DDNAME PARMLIB. A COMMENTED SET
//* OF XDS CONTROL STATEMENTS IS LOCATED IN THE CMFXDS01
//* MEMBER OF THE HILEVEL.BBPARM LIBRARY.
//*
//*
//* EM - XX (THE DEFAULT IS EM=00)
//*
//* SPECIFIES THE SUFFIX OF THE PWSCPMXX CONTROL STATEMENT
//* MEMBER YOU WANT THE EXCEPTION MONITOR TO USE. NOTE: THIS
//* PARAMETER IS ONLY USED BY MAINVIEW FOR OS/390. IF MV
//* MANAGER FOR OS/390 IS NOT INSTALLED, THIS PARAMETER IS
//* IGNORED.
//*
//*
//* CXEN - Y|N (THE DEFAULT IS CXEN=Y)
//*
//* SPECIFIES IF THE EXTRACTOR IS TO ISSUE AN ENQUEUE
//* PREVENTING ANOTHER EXTRACTOR FROM RUNNING.
//*
//* CMDID=Character
//*
//* This optional parameter defines a character to be used
//* as the "command id" character for use when entering
//* commands to the PAS or SYSPROG. Commands prefixed
//* with the command id character are routed to the PAS.
//* Commands prefixed with the command id character
//* repeated twice are routed to SYSPROG. For example,
//* if a plus sign is used as the command id character
//* "+DC=STATUS" would route the "DC=STATUS" command
//* to the PAS. "++TIME" would route the "TIME" command
//* to SYSPROG.
//*
//*

```

Figure 2-4 Example of the Instructions in BBILIB Member BBMPAS (Part 4 of 4), continued

```

//*      Permissible command id characters are:      *
//*      *                                           *
//*      >!.()*+>:<=&^%/?#'@+_" |                *
//*      *                                           *
//*      Caution: Do not use a character that is being used *
//*      for some other subsystem or is used as *
//*      the backspace character. The not sign (^) *
//*      is the default backspace character for JES2. *
//*      *                                           *
//*      Note: Some of these characters can not be entered *
//*      in JCL without enclosing them in quotes *
//*      or at all. However, all characters may be *
//*      entered using their two character hexadecimal *
//*      EBCDIC translation. For example, the *
//*      single quote mark (') can be entered as "7D". *
//*      Example:  CMDID=7D *
//*      *                                           *

```

Understanding the OS/390 PAS JCL Statements

Table 2-1 provides a description of the OS/390 PAS proc statement, the PAS EXEC statement, and the Extractor DD statements that are shown in Figure 2-2 on page 2-6.

Table 2-1 Extractor JCL Statements and Parameters (Part 1 of 5)

JCL Statement	Description
//MVSPAS PROC	specifies symbolic parameters for the OS/390 PAS proc For a detailed explanation of each parameter, see the <i>MAINVIEW Common Customization Guide</i> .
//PAS EXEC	specifies the program name (PGM=BBM9DA00) A TIME parameter should be large enough to prevent the possibility of a timeout (use TIME=1440 , if allowed). The PARM subparameters are all symbolic and use the same values that are defined for the corresponding parameter in the proc statement. For a detailed explanation of each of these parameters, see the <i>MAINVIEW Common Customization Guide</i> . The REGION parameter is symbolic and uses the same value that is defined for the corresponding RGN parameter in the proc statement. (See Figure 2-2 on page 2-6 for more information.)

Table 2-1 Extractor JCL Statements and Parameters (Part 2 of 5)

JCL Statement	Description
//STEPLIB DD	<p>defines a partitioned data set that contains the Extractor load modules</p> <p>The partitioned data set must be an authorized library, such as <i>hilevel.BBLINK</i>.</p> <p>This statement should be deleted if BBLINK was added to your system link list. (See the <i>MAINVIEW Common Customization Guide</i>.)</p>
//CMFCPMxx DD	<p>specifies one or more data sets where the Extractor records data that was collected by the CPM submonitor</p> <p>Do not define this statement if you are recording CPM data to SMF or if you are specifying the data set names on the REPORT Extractor control statement.</p> <p>To manually customize the CMFCPMxx DD statements to point to your CPM data sets, remove the DUMMY parameter and specify the following statement for each data set that you want to be dynamically allocated during Extractor initialization:</p> <p>//CMFCPMxx DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..CMFCPMxx</p> <p>where xx is a unique value for the allocated data set.</p> <p>The //CMFCPMxx DD statements can be defined to write simultaneously to the same data sets as the //CMFIPMxx DD statements. During AutoCustomization, these statements are defined dynamically, if required.</p> <p>Specifying alternative data sets is optional; however, alternative data-set support is provided only if alternative data is specified.</p> <p>See the <i>CMF[®] MONITOR Customization Guide</i> for more information about the CPM submonitor, allocating CPM data sets, and alternative data set support. See the <i>CMF MONITOR Batch User Guide</i> for more information about the REPORT Extractor control statement.</p>

Table 2-1 Extractor JCL Statements and Parameters (Part 3 of 5)

JCL Statement	Description
//CMFIPMxx DD	<p>specifies one or more data sets where the Extractor records data that was collected by the IPM submonitor</p> <p>Do not define this statement if you are recording IPM data to SMF or if you are specifying the data set names on the REPORT Extractor control statement.</p> <p>To manually customize the CMFIPMxx DD statements to point to your IPM data sets, remove the DUMMY parameter and specify the following statement for each data set that you want dynamically allocated during Extractor initialization:</p> <p>//CMFIPMxx DD DISP=SHR,DSN=&BAVSHLQ..&SYSID..CMFIPMxx</p> <p>where xx is a unique value for the allocated data set.</p> <p>The //CMFIPMxx DD statements can be defined to write simultaneously to the same data sets as the //CMFCPMxx DD statements. During AutoCustomization, these statements are defined dynamically.</p> <p>Specifying alternative data sets is optional; however, alternative data-set support is provided only if alternative data is specified.</p> <p>See the <i>CMF MONITOR Customization Guide</i> for more information about the IPM submonitor, allocating IPM data sets, and alternative data set support. See the <i>CMF MONITOR Batch User Guide</i> for more information about the REPORT Extractor control statement.</p>
//CMFCDSxx DD or //CMFIDSxx DD	<p>specifies one or more data sets for DSO data from the IPM and CPM modes</p> <p>If defined, all CMF 240 records produced by the HEADMOVE control statement are directed to these data sets.</p> <p>See the <i>Data Set Optimizer (DSO) User Guide and Reference</i> for more information about the HEADMOVE control statement and allocating DSO data sets.</p> <p>These DD statements function the same way as the //CMFCPMxx DD and //CMFIPMxx DD statements.</p> <p>Do not define this statement if you are recording DSO data to SMF or if you are specifying the data set names on the HEADMOVE Extractor control statement.</p>
//CMFDUMP DD	<p>defines a print data set for snapshot dumps</p> <p>When a program fails in CMF MONITOR, the abend is intercepted by an ESTAE routine and a formatted dump of the failing component is printed.</p>
//CMFLOG DD	<p>defines an optional file that can be used to direct the CMF MONITOR Control Card Log to an alternative data set</p> <p>The data set for the Control Card Log is dynamically allocated and deallocated as needed when no //CMFLOG DD statement is present. The CMFLOG data set allows for immediate inspection of messages, regardless of how long an Extractor job runs. Dynamic allocation is performed based on the MSGCLASS parameter on the JOB statement for batch jobs or on CLASS A for started tasks.</p>

Table 2-1 Extractor JCL Statements and Parameters (Part 4 of 5)

JCL Statement	Description
//CMFMSG DD	<p>defines a print data set that contains non-initialization messages for the system</p> <p>The //CMFMSG DD data set is dynamically allocated to SYSOUT CLASS A when no DD statement is present. To print this data set, issue a MSGFREE command by using the MVS MODIFY command. The data set is dynamically deallocated and printed, and a new allocation occurs immediately.</p>
//PARMLIB DD	<p>defines a partitioned data set that contains control statement members that are read by the Extractor</p> <p>The PARMLIB data set must be a fixed-block data set with a logical record length of 80, such as <i>hilevel.UBBPARM</i>.</p>
//BBSECURE DD	<p>is a required statement only if you want to use the security views, SERDEF, SERDEFD, and SERDEFL, to define security parameter definitions for CMF MONITOR and/or MAINVIEW for OS/390 security resource calls</p> <p>If specified, the data set name that is defined to the CAS proc BBSECURE statement must also be defined to the PAS proc BBSECURE statement. See the <i>MAINVIEW Common Customization Guide</i> for information about creating the security data set.</p> <p>BMC Software recommends that you define a BBSECURE data set to the PAS proc; otherwise, your system must run with the default security calls that are made for CMF MONITOR or MAINVIEW for OS/390.</p> <p>If you do not define a BBSECURE data set, you must either remove or comment out this statement from the PAS proc. An error results when the BBSECURE DD is present and there is no data set allocated.</p> <p>The security resource definitions in the BBSECURE data set are used by the CAS and PAS to determine whether security checking should occur for system, product, view, or action access. Defining a BBSECURE data set is only one part of setting up security to function with your external security manager; see the <i>MAINVIEW Common Customization Guide</i> for more information about customizing security.</p>
//BBVDEF DD	<p>defines the view library containing all default views for CMF MONITOR or MAINVIEW for OS/390</p> <p>See the <i>MAINVIEW Common Customization Guide</i> for more information about this DD statement.</p>
//BBACTDEF DD	<p>defines the library containing all action and view tables for CMF MONITOR or MAINVIEW for OS/390</p>
//PARMFILE DD	<p>defines a VSAM data set that contains:</p> <ul style="list-style-type: none"> • data set names for historical data sets, as defined by means of the DSLIST view For more information, see the <i>CMF MONITOR Online User Guide</i>. • user-defined workload definitions created through MAINVIEW for OS/390 by means of the WKLIST view <p>This data set is allocated and initially loaded during the customization process.</p>

Table 2-1 Extractor JCL Statements and Parameters (Part 5 of 5)

JCL Statement	Description
//HISTDS00 DD //HISTDS01 DD //HISTDS02 DD	defines up to 100 VSAM data sets that make up the short-term historical database Refer to the <i>MAINVIEW Common Customization Guide</i> for information about defining HISTDS nn DD statements. The short-term historical database is used for historical data support. See the <i>MAINVIEW Common Customization Guide</i> for information about maintaining these data sets.
//HST1DS00 DD //HST1DS01 DD //HST1DS02 DD	defines up to 100 VSAM data sets that make up the long-term historical database HST1DS nn DD statements are defined and maintained in the same way as HISTDS nn DD statements.

Copying Exception Monitor Members (Required)

In this section, you submit a job that copies default control statement members for the Exception Monitor from *hilevel.BBSAMP* to your own *hilevel.UBBPARM* library. Subsequently, all modifications should be made in UBBPARM, leaving the originals untouched in BBSAMP.

Note: For more information about the Exception Monitor and control statement members, see Chapter 3, “Setting Up the Exception Monitor” and Chapter 7, “Maintaining the Exception Monitor.”

To copy the default Exception Monitor members, follow these steps:

Step 1 Copy *hilevel.BBSAMP* member MMRCOPYP to your private JCL library.

MMRCOPYP is the JCL that copies the control statement members from *hilevel.BBSAMP* to *hilevel.UBBPARM*.

Step 2 Modify the JCL by following the directions at the top of the member.

Step 3 Submit the JCL.

Specifying the Extractor Operating Environment (Required)

You must specify the correct Extractor operating environment for the mix of BMC Software products that you have installed on your system. In this section, you select a sample member containing the minimum set of Extractor control statements for the mix of products at your site.

The following BMC Software products use the Extractor:

- MAINVIEW for OS/390
- CMF MONITOR

Note: If you are customizing CMF MONITOR and will not be recording Extractor data to SMF data sets, you must also

- allocate CPM output data sets
- optionally, allocate IPM output data sets

Consult the CMF MONITOR documentation for additional information about CPM and IPM. (CPM and IPM data sets are not required for MAINVIEW for OS/390.)

Each product or mix of products requires specific Extractor control statements to collect the necessary data for product views, screens, and reports. Samples of the different Extractor control statement sets for each product mix are shipped in BBPARM.

To specify the Extractor operating environment for your BMC Software product mix, follow these steps:

- Step 1** Create two members in *hilevel*.UBBPARM, with the names CMFCPM00 and CMFIPM00.
- Step 2** In Table 2-2 on page 2-17, note the BBPARM member name in the row that contains checkmarks for your mix of Extractor products.
- Step 3** Copy the correct sample member from BBPARM to the CMFCPM00 member in *hilevel*.UBBPARM.

Table 2-2 Sample Members to Copy into CMFCPM00

If You Are Customizing		Copy BBPARM Member
CMF MONITOR	MAINVIEW for OS/390	
X		CXACC
X	X	CXACCR
	X	CXACR

Activating CSMON Data Collection (Optional)

Both MAINVIEW for OS/390 and CMF MONITOR make use of the data-collection services of COMMON STORAGE MONITOR (CSMON) if you are using any of these products:

- CMF MONITOR CSMON Sampler
- CSMON itself
- SYSPROG CSMON Service

Therefore, you must activate CSMON data collection for use by both MAINVIEW for OS/390 and CMF MONITOR.

- Step 1** To enable COMMON STORAGE MONITOR data collection, add the following statement to SYS1.PARMLIB(IEFSSN $_{xx}$) after the definition for the primary subsystem (JES):

BBXS, BBXCSMON

Note: If you do not want to start the COMMON STORAGE MONITOR as a subsystem, you can add a statement to SYS1.PARMLIB(COMMND00) to execute a started task at IPL automatically.

For additional information, see comments in member \$CSMON in the BBPARM data set.

The COMMON STORAGE MONITOR uses IBM VSM tracking data, so it is also necessary to enable VSM storage tracking.

- Step 2** To enable VSM storage tracking, add the following statement to SYS1.PARMLIB(DIAG $_{xx}$):

VSM TRACK CSA(ON) SQA(ON)

Note: For additional information, see the IBM publication, *OS/390 MVS Initialization and Tuning Reference*.

Copying Sample Screen Definitions (Optional)

To copy sample screen definitions from *hilevel.BBSAMP* to your own site-wide library, *hilevel.SBBSDEF*, follow this procedure:

- Step 1** Copy *hilevel.BBSAMP* member MMRCOPYS to your private JCL library.
- MMRCOPYS is the JCL that copies the screen definitions from *hilevel.BBSAMP* to *hilevel.SBBSDEF*.
- Step 2** Modify the JCL by following the directions at the top of the member.
- Step 3** Submit the JCL.

Copying Optional Members into UBBPARM (Optional)

Optional PARMLIB members, BBDTMSDP and BBDTQRJ0, can be copied into your UBBPARM:

- The BBDTMSDP member is used to specify and define MVScope default sampling parameters for all monitoring sessions.
- The BBDTQRJ0 member works in conjunction with the JESTATR view to monitor a list of jobs that are required to be executing.

This section tells you how to copy the sample PARMLIB members BBDTMSDP and BBDTQRJ0 from *hilevel.BBPARM* to your *hilevel.UBBPARM* library. Subsequently, all modifications should be made in UBBPARM, leaving the distributed BPARM untouched.

Note: For more information about the BBDTMSDP PARMLIB member, refer to Chapter 12, “The MVScope Facility” in the *MAINVIEW for OS/390 User Guide and Reference*.

To copy the default BBDTMSDP and BBDTQRJ0 PARMLIB members, follow these steps:

- Step 1** Copy *hilevel*.BBPARM member MMRCOPYQ to your private JCL library.

MMRCOPYQ is the JCL that copies the optional BBDTMSDP and BBDTQRJ0 members from *hilevel*.BBPARM to *hilevel*.UBBPARM.
- Step 2** Modify the JCL by following the directions at the top of the member.
- Step 3** Submit the JCL.

Authorizing SYSPROG Services in TSO Line Mode (Optional)

To authorize access to System Programmer (SYSPROG) services in TSO line mode, follow these steps:

- Step 1** Copy the member SYSPROG from the BBSAMP library to the CLIST library that is available to TSO users.
- Step 2** Update the CLIST member to add the *hilevel* qualifier.
- Step 3** Add SYSPROG to the AUTHPGM list and the AUTHCMD list in SYS1.PARMLIB(IKJTSOxx).
- Step 4** You can now invoke SYSPROG services by typing **TSO SYSPROG** on the **COMMAND** line.

Controlling Job Step Data Collection (Optional)

In MAINVIEW for OS/390, you can use the job step data collector and PARMLIB member BBDJST00 to collect and report job step-level data for specified jobs or job steps. In addition, you can activate Batch Optimizer support in the MAINVIEW for OS/390 product. PARMLIB member BBDJST00 controls the specific jobs or job steps to be monitored. It is available only in MAINVIEW for OS/390.

This section copies sample PARMLIB member BBDJST00 from *hilevel.BBSAMP* to your *hilevel.UBBPARM* library. Subsequently, all modifications should be made in UBBPARM, leaving the originals in BBSAMP untouched.

Note: For more information about the Exception Monitor and control statement members, refer to Chapter 5, “Controlling Job Step Data Collection” in the *MAINVIEW for OS/390 User Guide and Reference*.

To copy the default BBDJST00 PARMLIB member, follow these steps:

Step 1 Copy *hilevel.BBSAMP* member MMRCOPYJ to your private JCL library.

MMRCOPYJ is the JCL that copies the PARMLIB member from *hilevel.BBSAMP* to *hilevel.UBBPARM*.

Step 2 Modify the JCL by following the directions at the top of the member.

Step 3 Submit the JCL.

Setting Up Long-Term History Data Collection (Optional)

In MAINVIEW for OS/390, you can use the long-term history data collection facility to set up a second set of interval recorder files containing history that is written less frequently than normal short-term history data. (The short-term collection interval is usually once every 15 minutes.)

The data that is written to the long-term history files consists of job, device, and system data records only. Because the long-term history records are much smaller in number and size than traditional short-term history records, you should be able to retain data much longer for online and batch viewing and reporting.

The long-term history data can be displayed by using a special set of long-term history views. These views are accessible from the **Long Term Data** option on the EZM390 menu in MAINVIEW for OS/390. In addition, if you want to see all available long-term views, display the LONGTERM view by entering **LONGTERM** on the **COMMAND** line.

You specify the long-term history data-collection parameter in member BBDTLTDC. To activate long-term history data collection, follow this procedure:

- Step 1** Copy the BBDTLTDC member to UBBPARM and customize it for your particular needs.

The short-term data-collection interval for MAINVIEW for OS/390 is synchronized with the CMF MONITOR Extractor. See the CMF MONITOR Extractor 'REPORT' control statement to specify the short-term data-collection interval.

The long-term data-collection interval, as distributed with the product, is 4X, which means that the long-term interval consists of four short-term intervals. The default short-term interval is 15 minutes. So, by default, long-term data will be collected every 60 minutes.

The minimum long-term interval is 15 minutes, and the maximum long-term interval is six hours. If the value that is computed from the control statement in the BBDTLTDC member results in a long-term data-collection interval that is too short or too long, the minimum or maximum value is used instead.

For example, if you specify a minimum short-term interval of two minutes in the CMF MONITOR Extractor 'REPORT' control statement, then a multiplier of 8X will be required to generate a long-term interval of 16 minutes, which is greater than the minimum of 15 minutes. Also, the long-term and short-term intervals could be the same, assuming that the short-term interval is at least 15 minutes.

The control statements in member BBDTLTDC are shown in Figure 2-5.

Figure 2-5 Control Statements for Long-Term Data Collection

```

<!-- Control statements must be in upper case -->

<LONG_TERM_DATA_COLLECTION>
  <ENABLED>NO</ENABLED>
  <INTERVAL_LENGTH>4X</INTERVAL_LENGTH>
  <DATA_COLLECTORS>
    <CLASS>ADDRESS SPACE</CLASS>
    <CLASS>DEVICE</CLASS>
    <CLASS>SYSTEM</CLASS>
  </DATA_COLLECTORS>
</LONG_TERM_DATA_COLLECTION>

```

Step 2 To activate long-term history data collection, you must change the **Enabled** value to **Yes** in member BBDTLTDC.

Step 3 In addition, you must define and initialize a second set of interval recorder files. Long-term history data sets are created and initialized like the short-term history data sets, except that their DDnames begin with HST1 rather than HIST.

For additional information about defining the new HST1 files, refer to chapter 13 of the *MAINVIEW Administration Guide* and Step 21: Create MVS PAS Historical Data Sets in the *MAINVIEW Common Customization Guide*.

What Next?

You have now completed the manual customization procedure for MAINVIEW for OS/390. At this point, BMC Software recommends that you perform the following steps:

- Step 1** Read the *MAINVIEW Common Customization Guide* and the entire *MAINVIEW Administration Guide*.
- Step 2** Complete the steps in the *MAINVIEW Administration Guide* to finish setting up your MAINVIEW environment and to start the address spaces that are necessary to run MAINVIEW for OS/390.

When you have completed the tasks in the *MAINVIEW Common Customization Guide* and the *MAINVIEW Administration Guide*, continue setting up MAINVIEW for OS/390 by following these steps:

- Step 3** Use the MAINVIEW CLIST to access MAINVIEW for OS/390.
- Step 4** Complete the steps in Chapter 3, “Setting Up the Exception Monitor.”
- Step 5** Complete the steps in Chapter 4, “Defining Workloads and Service Objectives.”

Chapter 3 **Setting Up the Exception Monitor**

The Exception Monitor provides one of the fastest and easiest methods for detecting performance problems or potential problems. This chapter explains how to start the Exception Monitor, both manually and automatically.

For information about creating your own control statement member for use with the Exception Monitor, see Chapter 7, “Maintaining the Exception Monitor.”

For information about monitoring exceptions by using the Exception Monitor, see the *MAINVIEW for OS/390 User Guide and Reference*.

This chapter includes the following topics:

Understanding the Exception Monitor	3-2
Starting the Exception Monitor.	3-4

Understanding the Exception Monitor

For each system resource, you can specify an upper limit for utilization called a *threshold*. The Exception Monitor continuously monitors the resource at specified intervals and generates a warning message if that threshold is exceeded. These messages are displayed both in the WARN view and on the OS/390 console. By keeping a close eye on Exception Monitor messages, you can take steps to correct problems or potential problems before they severely impact performance.

Note: To address potential problems automatically, you might want to set up an AutoOPERATOR Solution that is triggered by warning messages. See the *MAINVIEW AutoOPERATOR Solutions Guide* for more information.

How the Exception Monitor Knows What to Monitor

The Exception Monitor tracks system resources according to the *samplers* that are specified in the currently active *control statement member*:

- A *sampler* is a program that monitors a particular aspect of system performance.

MAINVIEW for OS/390 provides a diverse set of samplers from which to choose to monitor activities such as enqueue conflicts, various types of I/O activity, and CPU utilization.

- A *control statement member* is a collection of one or more samplers.

Each member contains the initial threshold settings for its constituent samplers, which you can either keep or alter.

Only one control statement member can be active at a time. MAINVIEW for OS/390 ships two default control statement members, PWSCPM00 (which is modifiable) and PWSCPMXA (which is not).

Both PWSCPM00 and PWSCPMXA contain all of the available MAINVIEW for OS/390 samplers and therefore monitor every possible aspect of system performance. However, using the Exception Monitor Member List, you can create your own control statement members to contain a subset of samplers, thus monitoring only specific areas of performance. See “Displaying the Exception Monitor Member List” on page 7-2 for more information.

The following example illustrates how you might use the Exception Monitor to gather information about a particular aspect of system performance.

Example

Suppose that, for resource-planning purposes, you want to record how often CPU2 on SYSA is utilized beyond 75 percent of its capacity. After accessing the Exception Monitor on SYSA, follow these steps:

- Step 1** Create a control statement member called PWSCPMC2.
- Step 2** Select the CPU sampler by typing **S** next to it.
- Step 3** Set a threshold for CPU2 by typing **75** next to the **CPU2** field on the CPU Sampler screen.
- Step 4** To monitor channel path utilization and the paging subsystem simultaneously, add the samplers CHA and PAG to PWSCPMC2 as well.
- Step 5** Start the Exception Monitor with the PWSCPMC2 control statement member.

The Exception Monitor will now monitor the CPUs, channel paths, and paging subsystem according to the thresholds that you set. When CPU2 is utilized above 75 percent of its capacity, the Exception Monitor sends a warning message to both the WARN view and the OS/390 console.

The next section tells you how to start the Exception Monitor.

Starting the Exception Monitor

You can set up the Exception Monitor so that it is started automatically each time MAINVIEW for OS/390 is initialized, or you can start it manually when you need it.

This section assumes that you are familiar with the information in “Understanding the Exception Monitor” on page 3-2.

Automatically Starting the Exception Monitor

The Exception Monitor executes as a subtask in the OS/390 product address space. To start the Exception Monitor automatically at MAINVIEW for OS/390 initialization, follow these steps:

Step 1 Decide which control statement member you want to use.

You can use the default member, PWSCPM00, or you can create your own member. If you prefer creating your own member, consult “Creating Control Statement Members” on page 7-3 to create your member, and then add it to *hilevel*.UBBPARM. The control statement member with which the Exception Monitor is started automatically *must* reside in the data set that is allocated by the DD name PARMLIB.

Note: If you are planning to use PWSCPM00, be sure that the PARMLIB DD statement points to the data set where PWSCPM00 resides. By default, PWSCPM00 resides in *hilevel*.UBBPARM.

Step 2 Add the following DD statement to the OS/390 product address space JCL:

```
//PARMLIB DD DSN=hilevel.UBBPARM, ...
```

Note: If you used AutoCustomization, this DD statement has already been added.

Step 3 In the EM parameter of the PROC statement, code the suffix of the control statement member (PWSCPM xx) with which you want to start MAINVIEW for OS/390:

```
//MVSPAS PROC EM= $xx$ 
```

For example, to start MAINVIEW for OS/390 by using the PWSCPMC2 control statement member, code

```
//MVSPAS PROC EM=C2
```

If you do not code anything on the EM statement, MAINVIEW for OS/390 is started with the default control statement member, PWSCPM00. You can modify PWSCPM00 so that only a subset of samplers are activated on a regular basis. See “Updating a Control Statement Member” on page 7-9 for instructions.

Each time that the Exception Monitor is started, the samplers in the control statement member that you named are activated.

Manually Starting and Stopping the Exception Monitor

To start the Exception Monitor manually, follow these steps:

Step 1 Display the EMSTAT view, as shown in Figure 3-1.

Figure 3-1 EMSTAT View

```

DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mmm)MVMVS -----
COMMAND ==>                                     SCROLL ==> PAGE
CURR WIN ==> 1          ALT WIN ==>
W1 =EMSTAT=====SYSD=====*=====DDMMYYYY==HH:MM:SS====MVMVS====D==1
C  Mem Name Current   Total
-- -----
   PWSCPM00         4    194

```

Step 2 Place the cursor on the **Mem Name** field and press **Enter**.

The Exception Monitor Member List is displayed, as shown in Figure 3-2 on page 3-6.

Figure 3-2 Exception Monitor Member List

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS  -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =EMSTAT=====SYSD=====*=====DDMMYYYY==HH:MM:SS====MVMVS====D===1
C  Mem Name Current  Total
-----
-----  EXCEPTION MONITOR - MEMBER LIST -----  ROW 1 TO 5 of 5
OPTION  ==>
Valid line commands are:
S - Select this member for update
E - Execute AEWS with this member
D - Delete this member from list
Valid OPTIONS are:
C - Create new member
A - Display/Update active AEWS
  Samplers
P - Stop AEWS sampling

-----
Name      Description
-----
PWSCPMJR  TEST MULTIPLE DEV SAMPLERS
PWSCPMJW  MONITOR SYSTEM PAGING
PWSCPMMK  TSO ANALYSIS
PWSCPMSU  test
PWSCPMMV  MVMVS Exception Samplers
***** Bottom of data *****
-----
Last Modified  User
-----
MM/DD/YY 14:17  MAK1
MM/DD/YY 11:03  WEC2
MM/DD/YY 08:30  IMS1
MM/DD/YY 17:31  JAM1
MM/DD/YY 10:03  WEC2

```

Step 3 Type **E** (Execute) to the left of the member that you want to start, and press **Enter**.

A status message appears in the upper right corner of the screen to indicate that the selected control statement member is now active.

Note: Only one control statement member can be active at a time. To execute a new control statement member, stop the Exception Monitor by typing a **P** on the **OPTION** line, and use the **E** line command to the left of the desired member to restart the Monitor.

If you want to start the Exception Monitor with your own PWSCPMxx member, rather than with the PWSCPM00 default, read “Creating Control Statement Members” on page 7-3 first, and then start the Monitor by using the **E** command.

Chapter 4 Defining Workloads and Service Objectives

This chapter describes how to create your own workloads to reduce the amount of time and effort that are required to monitor your system. Although the MAINVIEW for OS/390 product creates some workloads for you automatically, BMC Software recommends that you use the WKLIST view to create additional workloads that make sense for your organization.

This chapter describes the process for creating workloads and concludes with some detailed examples of creating workloads and establishing service objectives.

This chapter includes the following topics:

Overview	4-2
Advantages of Creating Your Own Workloads	4-2
Deciding Which Workloads to Define	4-3
Creating Workload Definitions	4-6
Characterizing Workloads	4-9
Setting Service Objectives	4-23
Examples	4-32

Overview

Using the WKLIST view, you can group any combination of address spaces into one workload, and then monitor the performance of those address spaces as a single entity in terms of service, delays, and resource utilization. This process consists of four basic steps:

1. Decide which workloads you want to define.
2. Create the workload definitions.
3. Set service objectives for the workloads.
4. Check to see how well the service objectives are being met.

For Workload Manager (WLM) workload monitoring, MAINVIEW for OS/390 provides WLM monitoring views. See the *MAINVIEW for OS/390 User Guide and Reference* for more information.

For information about changing or deleting workloads, see “Changing Name, Description, and Current Status” on page 6-2.

Advantages of Creating Your Own Workloads

Consider the advantages of establishing your own workloads:

- By making extensive use of workloads, you can drastically reduce the amount of time and effort that is required to monitor the overall health of your system. In other words, it is much easier to monitor 10 workloads, each containing 20 jobs, than it is to track all 200 jobs individually.
- By setting performance objectives for your organization’s specific needs, you will be able to monitor the service that is given to entire departments, shifts, or functional areas.

For example, you might create objectives for one workload to monitor all TSO and batch activity for the Accounting group and another workload to track the same activity for the Shipping department. By creating these workloads, you will be able to immediately assess the impact of performance to both areas, rather than spending valuable time trying to figure out which jobs within an OS/390 performance group belong to each function.

Deciding Which Workloads to Define

The MAINVIEW for OS/390 product defines some types of workloads for you, and you can define other types.

Workloads You Can Define

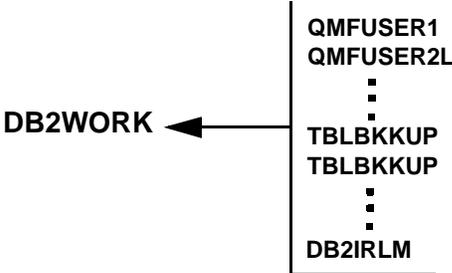
By using MAINVIEW for OS/390, you can define these types of workloads:

- ASCH—composed of address spaces scheduling work for OS/390 APPC (Advanced Program-to-Program Communications)
- Batch—composed of address spaces running batch jobs
- OMVS—composed of address spaces running OpenEdition OS/390 applications
- Started task—composed of address spaces running started tasks
- TSO—composed of address spaces running TSO sessions
- Composite—collections of other previously defined workloads

With composite workloads, you can monitor diverse collections of address spaces as a single entity.

For example, you might create a workload called DB2WORK to track all DB2-related address spaces: TSO address spaces that are used for QMF sessions, batch jobs that update DB2 tables, and DB2’s own started tasks. This concept is illustrated in Figure 4-1 on page 4-3.

Figure 4-1 Sample Composite Workload for DB2-Related Address Spaces



Up to 128 workloads can be defined.

Workloads Created for You

To make things easier, the MAINVIEW for OS/390 product has already created the following predefined workloads for you:

- ALLASCH—to monitor all APPC work
- ALLBAT—to monitor all batch jobs
- ALLOMVS—to monitor OS/390 UNIX System Services applications
- ALLSTC—to monitor all started tasks
- ALLTSO—to monitor all TSO sessions
- ALLWKLDS—to monitor all workloads on the system

MAINVIEW for OS/390 also creates some additional workloads, depending on which release of OS/390 you are running:

- If you are running in Goal mode, MAINVIEW for OS/390 creates
 - a *service class workload* for each service class that you defined through the OS/390 WLM definition dialogs

These workloads are identified by the characters SCL in the WKLIST **Type** field.

- a *WLM workload* for each WLM workload that you established through WLM

These workloads have a type of WKL. WLM workloads are actually composites of service classes.

MAINVIEW for OS/390 assigns the same names to service classes and WLM workloads that you assigned in your WLM service policies.

- If you are running in Compatibility mode, MAINVIEW for OS/390 creates a *performance group workload* for each performance group that is defined in the current IEAIPSxx member. These workloads are assigned names in the form PGRPnnnn, where nnnn is the performance group number. Using WKLIST, you can rename a PGRP workload to a name that better suits its purpose—for example, you might want to rename performance group workload PGRP0006 to HOTBATCH.

Note: You can define a MAINVIEW for OS/390 workload that is characterized for both WLM and SRM. MAINVIEW for OS/390 provides the appropriate performance goal information, whether you are using WLM (Goal or Compatibility mode) or SRM. See “Characterizing Workloads” on page 4-9 for more details.

Selecting Only the Jobs You Want

You do not have to group address spaces strictly by address space type. During the workload definition process, you can specify the selection criteria that an address space must satisfy before it can be included in the workload. Selection criteria include

- address space type
- user ID
- started task name
- job name
- job class
- performance group
- service class
- accounting data

For example, by specifying the accounting string of Department 65 as the selection criteria, you can create a workload to monitor all of the activity in that department—TSO, batch, and started task—as a single entity.

Now that you know what you can do with MAINVIEW for OS/390, consider the kinds of workloads that are best suited to your organization and proceed with creating workload definitions.

Creating Workload Definitions

To create a workload definition, follow these steps:

Step 1 Display the WKLIST view, as shown in Figure 4-2.

Figure 4-2 WKLIST View

```

DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ==>                                     SCROLL ==> PAGE
CURR WIN ==> 1          ALT WIN ==>
W1=WKLIST=====SYSC====*=====DDMMYYYY==HH:MM:SS=====MVMVS====D==58
C Workload Type Description                               Istatus Cstatus Obj Begin End
-----
AATSO   TSO   Test                                       Active  Active  YES 08:00 17:00
ALLASCH ASCH  All ASCH Address Spaces                          Active  Active  NO  00:00 00:00
ALLBAT  BAT   All Batch Address Spaces                            Active  Active  NO  00:00 00:00
ALLOMVS OMVS  All Open MVS Address Spaces                        Active  Active  NO  00:00 00:00
ALLSTC  STC   All Started Tasks                                    Active  Active  NO  00:00 00:00
ALLTSO  TSO   All TSO Address Spaces                                Active  Active  NO  00:00 00:00
ALLWKLDS COMP All Address Spaces                            Active  Active  NO  00:00 00:00
APPC    WKLD  APPC Workload                                         Active  Active  YES 00:00 23:59
APPCHOT BAT   TEST MMR22 TFT#TST2                                Active  Active  NO  00:00 00:00
APPCHOT SCLS  APPC Hot Transactions                                Active  Active  YES 00:00 23:59
APPCNRM SCLS  APPC Normal Transactions                            Active  Active  YES 00:00 23:59
BATCH   WKLD  Batch Workload                                         Active  Active  YES 00:00 23:59
BATHAL  SCLS  Batch Hal Jobs                                       Active  Active  YES 00:00 23:59
BATHOT  SCLS  Batch Hot Jobs                                       Active  Active  YES 00:00 23:59
BATNRM  SCLS  Batch Normal Jobs                                    Active  Active  YES 00:00 23:59
BATPROD SCLS  Batch Production Jobs                               Active  Active  YES 00:00 23:59
    
```

WKLIST displays a single line of information for each defined workload and is the view from which all workload-management activities are initiated. (For more information about managing these workloads, see Chapter 6, “Maintaining Workload Definitions.”)

For a description of each field in the WKLIST view, place the cursor on the field and press **PF1** (Help).

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

The Add Workload panel is displayed, as shown in Figure 4-3 on page 4-7.

Figure 4-3 Creating a Workload Definition Using the Add Workload Panel

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ==> _                                SCROLL ==> CSR

Enter Workload Name, Type and Description.

Name           ==>
Type           ==>      (ASCH, BAT, OMVS, STC, TSO, COMP)
Description    ==>

Press END when all entries are complete.
Enter CANCEL to cancel request.

```

Step 3 In the **Name** field, type a name for the workload.

The name must not exceed eight characters. All user-defined workload names must be unique. It is possible, however, for workloads whose names are defined outside of MAINVIEW for OS/390 (service class, WLM, or performance group workloads) to have names that are not unique. That is, while a WKL workload and a TSO workload can both be named PROD01, a TSO and a batch workload cannot share that name.

Tip: The **Wkld key** field, not the workload name, uniquely identifies a workload. This field is an excluded field in every workload view (MAINVIEW for OS/390 views beginning with W). To see this field from any workload view, type **CUSTom** on the **COMMAND** line, and then type **Excluded** on the View Customization panel.

Step 4 In the **Type** field, type one of these workload names:

- **ASCH**—for an APPC workload
- **BAT**—for a batch workload
- **OMVS**—for an OpenEdition MVS workload
- **STC**—for a started task workload
- **TSO**—for a TSO workload
- **COMP**—for a composite workload

Step 5 In the **Description** field, type a description not exceeding 40 characters.

Step 6 Type **END** on the **COMMAND** line to complete the workload definition. (If you want to cancel the definition instead, use the **CANCEL** command.)

When you enter the END command, a *workload characterization* panel is displayed.

Step 7 On the workload characterization panel, specify the characteristics that an address space must possess to be included in the new workload.

A different workload characterization panel exists for each type of workload, as discussed in the next section, “Characterizing Workloads” on page 4-9.

Step 8 To complete your workload definition, refer to the appropriate page in Table 4-1 and follow the instructions there.

Table 4-1 Characterizing Different Types of Workloads

To Perform This Task	Refer to
ASCH workload definitions	“Characterizing ASCH Workloads” on page 4-11
Batch workload definitions	“Characterizing Batch Workloads” on page 4-12
OMVS workload definitions	“Characterizing OMVS Workloads” on page 4-14
Started task workload definitions	“Characterizing Started Task Workloads” on page 4-16
TSO workload definitions	“Characterizing TSO Workloads” on page 4-17
Composite workload definitions	“Characterizing Composite Workloads” on page 4-19
Performance group workload definitions	“Characterizing Performance Group (PGRP) Workloads” on page 4-22

Note: Service class and WLM workloads cannot be characterized, because their goals and classifications are established exclusively by the ISPF WLM dialogs.

Step 9 To see what address spaces are in a workload after you have created it, hyperlink on the workload name in WKLIST, which takes you to WOVER, where you hyperlink again on the workload name.

Characterizing Workloads

After you have created a workload, you need to specify the kinds of address spaces that should make up the workload. This section tells you how to perform this task for different types of workloads.

Note: Some workload types, such as service class, WLM, and performance group workloads, are characterized automatically when they are created and cannot be characterized in the MAINVIEW for OS/390 product. You can, however, define a workload to both SRM and WLM, as described here.

You can use MAINVIEW for OS/390 to set up a workload for use in either Goal or Compatibility mode. For example, suppose you want to create a batch workload called ABCBAT that represents all jobs starting with ABC. You want this job to run under Performance Group 3 when WLM is running in Compatibility mode and under Service Class BATNORM when running in Goal mode. After you have defined the workload to both SRM and WLM, follow these steps in MAINVIEW for OS/390:

- Step 1** Go to the WKLIST view.
- Step 2** On the **COMMAND** line, type **ADD** to display an Add Workload panel.
- Step 3** Fill in the fields with appropriate values, as shown in Figure 4-4.

Figure 4-4 Workload Panel Field Values

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ===>

Enter Workload Name, Type and description.

Name           ===> ABCBAT
Type           ===> BAT      (ASCH, BAT, OMVS, STC, TSO, COMP)
Description    ===> Batch jobs for ABC department

Press END when all entries are complete.
Enter CANCEL to cancel request.

```

- Step 4** Press **END** to display the Characterize Batch Workload panel.
- Step 5** Fill in the fields with appropriate values, as shown in Figure 4-5 on page 4-10.

You can add both performance groups and service classes to your selection criteria.

Figure 4-5 Characterize Batch Workload Panel with Sample Values

```

BMC Software ----- CHARACTERIZE BATCH WORKLOAD -----
COMMAND ==>
Enter O to specify workload service objectives

Workload      - ABCBATCH
Description   - Batch jobs for ABC department

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

Jobname       ==> ABC*
Perf. group   ==> 3
Service class ==> BATNORM
Programmer name ==> *

Accounting Information
Data         ==>
Field #     ==>      Offset ==>
I/E        ==>      (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

When you are running in Goal mode, the service classes in BATNORM make up your workload and are SCL workload types.

When you are running in Compatibility mode, the jobs in Performance Group PGRP0003 make up your workload and are PGR workload types.

Valid Commands

Although each type of workload has a different workload characterization panel, the following commands are valid from all of the panels:

- END—when all entries are complete

Your updates are saved automatically and will be in effect the next time you access MAINVIEW for OS/390.

- CANCEL—to exit the panel without saving your changes

The O command, specifying service objectives for the workload, is valid from the batch and TSO panels only.

Characterizing ASCH Workloads

ASCH (APPC Scheduler) workloads are composed of address spaces that schedule work for OS/390 APPC (Advanced Program-to-Program Communications).

To characterize an ASCH workload, follow these steps:

Step 1 Display the Characterize ASCH Workload panel.

Figure 4-6 shows the panel that is displayed for the ALLASCH workload.

Figure 4-6 Characterize ASCH Workload Panel

```

BMC Software ----- CHARACTERIZE ASCH WORKLOAD-----
COMMAND ====> _

Workload      - ALLASCH
Description   - All ASCH workloads

Initial status ====> ACTIVE  (Initial collection status, Active/Inactv)

Specify the following selection criteria:

ASCH name      ====> *
Perf. group    ====>
Service class  ====>

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data-collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying ACTIVE. (To update this panel, type S, for SELECT, next to the workload name in the WKLIST view.)

- Step 3** Type the selection criteria values in the appropriate fields, as shown in the following table.

The default setup selects all started tasks for the workload, as indicated by the asterisk in the **ASCH name** field. (This wildcard character, *, is valid only in the **ASCH name** field.)

Field	Value	Description
ASCH name	MV*	selects all APPC address spaces beginning with MV
Perf. group	16	selects all APPC address spaces in performance group 16 when running in Compatibility mode
Service class	APPCNRM	selects all APPC address spaces in service class APPCNRM when running in Goal mode Wildcard characters are invalid in this field.

- Step 4** Press **END** to save your new or changed workload definition.

No service objectives apply for APPC workloads, so the workload definition is now complete.

Characterizing Batch Workloads

To characterize a batch workload, follow these steps:

- Step 1** Display the Characterize Batch Workload panel.

Figure 4-7 on page 4-13 shows the panel that is displayed for the ALLBAT workload.

Figure 4-7 Filling In Fields for the Characterize Batch Workload Panel

```

BMC Software ----- CHARACTERIZE BATCH WORKLOAD -----
COMMAND ==> _
Enter 0 to specify workload service objectives

Workload      - ALLBAT
Description   - All Batch Address Spaces

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

Jobname       ==> *
Job class     ==>
Perf. group   ==>
Service class ==>
Programmer name ==>

Accounting Information
Data         ==>
Field #      ==>   Offset ==>
I/E         ==>   (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying ACTIVE. (To update this panel, type S, for SELECT, next to the workload name in the WKLIST view.)

Step 3 Type the selection criteria in the appropriate fields, as shown in the following table.

Asterisks (*) are valid entries. The default setup selects all batch jobs for the workload, as indicated by the asterisk in the **Jobname** field.

Field	Value	Description
Jobname	DA*	selects all batch jobs beginning with DA
Job class	8	selects all jobs in class 8
Perf. group	16	selects all jobs in performance group 16 when running in Compatibility mode
Service class	BATNORM	selects all jobs in service class BATNORM when running in Goal mode Wildcard characters are invalid in this field.
Programmer name	VUSER1	selects all batch jobs belonging to programmer USER1

Step 4 (*optional*) Type data in the **Accounting Information** fields.

The data that you specify here is compared to the information in the ACCT keyword that is specified on the JOB or EXEC statement.

- 4.A** Type the character string to be matched in the **Data** field, the number in the **Field #**, and its location within the field in the **Offset** field.
- 4.B** To include the address space in the workload after the accounting data has been located, type **I** in the **I/E** field; to exclude it, type **E**.
- 4.C** Press **END** to save your new or changed workload definition.

Step 5 To set service objectives for the workload, type **O** on the **COMMAND** line, and then refer to “Service Objectives for Batch Workloads” on page 4-26.

Characterizing OMVS Workloads

An OMVS (OS/390 UNIX System Services) address space is one in which a POSIX application is running.

To characterize an OMVS workload, follow these steps:

Step 1 Display the Characterize OMVS Workload panel.

Figure 4-8 on page 4-15 shows the panel that is displayed for the ALLOMVS workload

Figure 4-8 Characterize OMVS Workload Panel

```

BMC Software ----- CHARACTERIZE OMVS WORKLOAD-----
COMMAND ==>> _

Workload      - ALLOMVS
Description   - All OMVS workloads

Initial status ==>> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

  OMVS name      ==>> *
  Perf. group    ==>>
  Service class  ==>>

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data-collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying ACTIVE. (To update this panel, type S, for SELECT, next to the workload name in the WKLIST view.)

Step 3 Type the selection criteria in the appropriate fields, as shown in the following table.

The default setup selects all started tasks for the workload, as indicated by the asterisk in the **OMVS name** field. (This wildcard character, *, is valid only in the **OMVS name** field.)

Field	Value	Description
OMVS name	MV*	selects all OMVS address spaces beginning with MV
Perf. group	16	selects all OMVS address spaces in performance group 16 when running in Compatibility mode
Service class	OMVSNRM	selects all OMVS address spaces in service class OMVSNRM when running in Goal mode Wildcard characters are invalid in this field.

Step 4 Press **END** to save your new or changed workload definition.

No service objectives apply for OMVS workloads, so the workload definition is now complete.

Characterizing Started Task Workloads

To characterize a started task workload, follow these steps:

Step 1 Display the Characterize STC Workload panel.

Figure 4-9 shows the panel that is displayed for the ALLSTC workload.

Figure 4-9 Characterize STC Workload Panel

```

BMC Software ----- CHARACTERIZE STC WORKLOAD-----
COMMAND ====> _

Workload      - ALLSTC
Description   - All Started Tasks

Initial status ====> ACTIVE  (Initial collection status, Active/Inactv)

Specify the following selection criteria:

STC name      ====> *
Job class    ====>
Perf. group   ====>
Service class ====>

Accounting Information
Data         ====>
Field #     ====>      Offset ====>
I/E        ====>      (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data-collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying **ACTIVE**. (To update this panel, type **S**, for **SELECT**, next to the workload name in the **WKLIST** view.)

Step 3 Type the selection criteria in the appropriate fields, as shown in the following table.

Asterisks (*) are valid entries, unless otherwise noted. The default setup selects all started tasks for the workload, as indicated by the asterisk in the **STC name** field.

Field	Value	Description
STC name	MV*	selects all started tasks beginning with MV
Job class	8	selects all started tasks in class 8
Perf. group	16	selects all started tasks in performance group 16 when running in Compatibility mode
Service class	STCNORM	selects all started tasks in service class STCNORM when running in Goal mode Wildcard characters are invalid in this field.

Step 4 Press **END** to save your new or changed workload definition.

No service objectives apply for started task workloads, so the workload definition is now complete.

Characterizing TSO Workloads

To characterize a TSO workload, follow these steps:

Step 1 Display the Characterize TSO Workload panel.

Figure 4-10 on page 4-18 shows the panel that is displayed for the ALLTSO workload.

Figure 4-10 Characterize TSO Workload Panel

```
BMC Software ----- CHARACTERIZE TSO WORKLOAD-----
COMMAND ==> _
Enter 0 to specify workload service objectives

Workload      - ALLTSO
Description   - All TSO Address Spaces

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

Userid        ==> *
Perf. group   ==>
Service class ==>

Accounting Information
Data          ==>
Field # ==>   Offset ==>
I/E          ==>   (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.
```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data-collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying ACTIVE. (To update this panel, type S, for SELECT, next to the workload name in the WKLIST view.)

Step 3 Type the selection criteria in the appropriate fields, as shown in the following table.

Asterisks (*) are valid entries, unless otherwise noted. The default setup selects all TSO user IDs for the workload, as indicated by the asterisk in the **Userid** field.

Field	Value	Description
Userid	ENG*	selects all TSO sessions beginning with ENG
Perf. group	16	selects the TSO sessions in performance group 16 when running in Compatibility mode
Service class	TSODEV	selects all TSO sessions in service class TSODEV when running in Goal mode Wildcard characters are invalid in this field.

Step 4 (*optional*) Type data in the **Accounting Information** fields.

The data that you specify here is compared to the information in the TSO user ID definition.

- 4.A** Type the character string to be matched in the **Data** field, the number in the **Field #** field, and its location within the field in the **Offset** field.
- 4.B** To include the address space in the workload once the accounting data has been located, type **I** in the **I/E** field; to exclude it, type **E**.
- 4.C** Press **END** to save your new or changed workload definition.

Step 5 To set service objectives for the workload, type **O** on the **COMMAND** line, and then refer to “TSO Workload Service Objectives” on page 4-28.

Characterizing Composite Workloads

Note: WLM workloads are composites of service classes, are created automatically, and cannot be characterized.

To characterize a composite workload, follow these steps:

Step 1 Display the Characterize Composite Workload panel.

When you display this panel from WKLIST, it lists all workloads that are currently defined for the composite and shows their weighting factors.

Figure 4-11 shows the panel that is displayed for COMPO1, a sample workload.

Figure 4-11 Characterize Composite Workload Panel

```

BMC Software ----- CHARACTERIZE COMPOSITE WORKLOAD -----
OPTION ==> _
Valid line commands are:          Valid options are:
D - Delete selected workload      A - Add workloads to this composite

Workload   - COMPO1
Description - Test composite workload

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

The sum of all Weighting % fields must be 100. Current total = 0 %

-----
Name          Description          1          2          3          4          5          6          7          8          9          10
-----
PGRP0001     Performance Group    1          25
PGRP0002     Performance Group    2          25
PGRP0007     Performance Group    7          25
PGRP0008     Performance Group    8          25
*****
***** BOTTOM OF DATA *****

```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data-collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying ACTIVE. (To update this panel, type **S**, for SELECT, next to the workload name in the WKLIST view.)

The next two sections explain how to delete and add constituent workloads to a composite workload.

Deleting a Constituent Workload

To delete a workload from this list, type **D** (Delete) next to the workload and press **Enter**.

Adding a Constituent Workload

To add a workload to the composite, follow these steps:

Step 1 On the **COMMAND** line, type **A** (Add) and press **Enter**.

The Composite Workload Characterization panel is displayed, as shown in Figure 4-12.

Figure 4-12 Add a Workload to a Composite Workload

```

BMC Software ---- COMPOSITE WORKLOAD CHARACTERIZATION ----- ROW 1 OF 96
COMMAND ==>                                               SCROLL ==> CSR
Valid line commands are:
S - Select workload for inclusion

Workload      - COMP01
Description   - Test composite workload

  S  Name          Description
-----
    ALLASCH      All APPC Address Spaces
    ALLBAT       All Batch Address Spaces
    ALLOMVS      All OpenEdition MVS Address Spaces
    ALLSTC       All Started Tasks
    ALLTSO       All TSO Address Spaces
    ALLWKLDS     All Address Spaces
    Hotbatch     Performance Group      3
    PGRP0000     Performance Group      0
    * PGRP0001   Performance Group      1
    * PGRP0002   Performance Group      2
    * PGRP0007   Performance Group      7
    * PGRP0008   Performance Group      8
    PGRP0009     Performance Group      9
    PGRP0010     Performance Group     10

```

This panel displays the workloads that you can add to the composite workload. Asterisks indicate the workloads that are already included.

Step 2 Type **S** (Select) next to the workloads that you want to include in the composite.

Step 3 When you are finished, type **END** to return to the Characterize Composite Workload panel.

Step 4 In the **Weighting %** field, assign to each workload a weighting factor that reflects its relative importance to the group.

Note: This action effectively sets the service objectives for the workload. The total must equal 100.

A composite workload's service objectives are monitored according to the time periods that are specified by its constituent workloads. For example, if COMP1 includes SHIFT1 (whose service objectives are monitored between 08:00 and 12:00) and SHIFT2 (which is monitored from 11:00 to 02:00), COMP1 is monitored between 08:00 and 02:00.

If SHIFT1 is given a weighting factor of 75 percent, and SHIFT2 is assigned a weighting factor of 25 percent, SHIFT1 is three times as important as SHIFT2 in calculating how well COMP1 is performing as a whole.

To examine this concept more closely, suppose that SHIFT1 is meeting 60 percent of its service objectives, whereas SHIFT2 is meeting only 20 percent of its service objectives. You would like to know how well the composite workload, COMP1, is meeting its service objectives.

Although the contribution of SHIFT1 is 60 percent, this figure actually accounts for a full 75 percent of the total measure of COMP1. Multiply 60 percent by .75 to get a value of 45 percent. To calculate the contribution of SHIFT2, simply multiply 20 by .25 to get 5 percent. Adding the two figures together gives a total of 50 percent. COMP1 is meeting 50 percent of its service objectives.

Step 5 Press **END** to save your new or changed workload.

Characterizing Performance Group (PGRP) Workloads

Unless you are running with WLM in Goal mode, performance group workloads are defined automatically by the MAINVIEW for OS/390 product. You can, however, change the name and description of the performance group to something more meaningful (see “Changing Name, Description, and Current Status” on page 6-2), or you can change the initial status. (If you are running in Goal mode, a service class workload is created for you instead.)

To change the initial status of a performance group workload, follow these steps:

Step 1 Display the Characterize Performance Group panel by typing **S** next to a performance group workload on WKLIST.

Figure 4-13 on page 4-23 shows the panel that is displayed for Performance group 28.

Figure 4-13 Characterize Performance Group (PGRP) Workload

```

BMC Software ----- CHARACTERIZE PERFORMANCE GROUP-----
COMMAND ==> _
Enter O to specify workload service objectives

Workload      - PGRP0028
Description - Performance group    28

Initial status ==> Active (Initial collection status, Active/Inactv)

Performance group - 1

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 2 In the **Initial status** field, type *one* of the following values:

- **ACTIVE**—if you want data-collection services for this workload to begin as soon as MAINVIEW for OS/390 is initialized
- **INACTV**—if you do not want data reported for the workload at this time

You can enable data reporting at your convenience by updating the workload characterization panel and specifying ACTIVE. (To update this panel, type S, for SELECT, next to the workload name in the WKLIST view.)

Step 3 Press **END** to save your new or changed workload definition.

Step 4 To set service objectives, type **O** on the **COMMAND** line, and then proceed to the next section, “Setting Service Objectives.”

Setting Service Objectives

Now that you have defined your workloads, it is time to set some service objectives. The following table characterizes the service objectives that can be set for each type of workload. Following the table are instructions for setting service objectives for the various workload types.

You cannot define service objectives for started task, ASCH, or OMVS workloads.

**Table 4-2 Service Objectives for Different Types of Workloads
(Part 1 of 2)**

Workload	Service Objective												
TSO	<p>TSO is specified in terms of <i>response time</i>. Response time is the elapsed time between the issuance of a command and the system's response.</p> <p>For example, a TSO performance group might have a response time of less than 1 second for 90 percent of all transactions and less than 3 seconds for 100 percent of all transactions, between the hours of 8:00 A.M. and 5:00 P.M. See "TSO Workload Service Objectives" on page 4-28 for more information.</p>												
Batch	<p>This workload is specified in terms of <i>turnaround time</i>. Turnaround time is the elapsed time between submission of a job and the return of the completed output.</p> <p>For example, a batch performance group might have a turnaround time of less than 5 minutes for 80 percent of batch jobs and less than 10 minutes for 100 percent of all jobs, between the hours of 8:00 A.M. and 2:30 P.M. See "Service Objectives for Batch Workloads" on page 4-26 for more information.</p>												
Performance group	<p>This type of workload is established by using either TSO response time or batch turnaround time, depending on what is appropriate. (See Service Objective descriptions for TSO and Batch in this table.)</p>												
Service class	<p>The service class workload depends on the goal definition and importance that you assign, <i>during WLM service policy definition</i>, to each period composing the service class.</p> <p>Within the same service class, you can express performance goals for each period in completely different terms. For example, periods 1 and 2 might have response-time goals, while the period 3 goal might be expressed in terms of velocity. Additionally, you can make the period 1 performance goals more important than any other period's goals. To normalize these disparate goals, MAINVIEW for OS/390 assigns a weighting factor based upon the importance that you assign, as follows:</p> <p>Importance/Weight</p> <table data-bbox="743 1352 911 1535"> <tbody> <tr> <td>none</td> <td>1</td> </tr> <tr> <td>5</td> <td>2</td> </tr> <tr> <td>4</td> <td>4</td> </tr> <tr> <td>3</td> <td>8</td> </tr> <tr> <td>2</td> <td>16</td> </tr> <tr> <td>1</td> <td>32</td> </tr> </tbody> </table> <p>For example, suppose service class TSONORM has three periods defined. Period 1 has an importance of 1, while periods 2 and 3 have no importance rating. Therefore, the performance in period 1 is 32 times more important than the performance in periods 2 and 3. In other words, because period 1 is so much more important to the workload, TSONORM does well as long as period 1 meets its objectives—even if periods 2 and 3 are doing poorly.</p>	none	1	5	2	4	4	3	8	2	16	1	32
none	1												
5	2												
4	4												
3	8												
2	16												
1	32												

Table 4-2 Service Objectives for Different Types of Workloads (Part 2 of 2)

Workload	Service Objective
Composite	<p>A composite workload is set by assigning a weighting factor to each constituent workload. This factor reflects the workload's relative importance to the group as a whole. In this way, the different service measures for TSO and batch workloads are synthesized, thus enabling a composite workload to contain a mixture of both workload types. Composite workloads are then measured in terms of the percentage of <i>total</i> service objectives that they accomplish. See "Adding a Constituent Workload" on page 4-21 for more information about how composite workload service objectives are measured.</p>
WLM	<p>A WLM workload is a composite of service class workloads. Each constituent workload is equally weighted. For example, if a WLM workload contains service classes TSONORM, TSOHOT, and TSOSHIFT1, the performance of each contributes equally to the WLM workload service objectives as a whole.</p> <p>Like other composite workloads, the total weight for WLM workloads must equal 100. If the workloads cannot be equally divided into 100, the remainder is distributed among the first few workloads. For example, if a WLM workload has seven workloads, each workload counts for 14 percent of the total service objective with a remainder of 2. In other words, the first two workloads in the WLM workload definition will be incremented by 1 and thus will count for 15 percent instead of 14 percent.</p>

Service Objectives for Workloads

To set service objectives for a workload, follow these steps:

Step 1 On any workload characterization panel, perform *one* of the following tasks:

- On the **COMMAND** line, type **O** (except for started task, ASCH, and OMVS workloads).
- On the **COMMAND** line of the WKLIST view, type the **O** command.

A Service Objective Type panel for that workload type is displayed, as shown in Figure 4-14 on page 4-26. Two Service Objective Type panels exist, one for batch and one for TSO workloads. (Composite workloads do not have Service Objective Type panels.)

Note: If you are setting service objectives for any type of workload other than a performance group workload, skip to Step 3.

- Step 2** On the Service Objective Type panel, indicate whether you want to monitor the performance group by batch or TSO service measures.

Figure 4-14 Service Objective Type Panel

```

BMC Software ----- SERVICE OBJECTIVE TYPE -----
OPTION ==>                                     SCROLL ==> PAGE

Enter type of Service Level Objectives to be specified.

TYPE ==> B  (B - Batch turnaround time
           T - TSO transaction response time)

Press ENTER when type has been chosen.
Enter END command to cancel update.

```

- Step 3** See “Service Objectives for Batch Workloads” or “TSO Workload Service Objectives” on page 4-28 for information about how to proceed.

Service Objectives for Batch Workloads

To set service objectives for a batch workload, follow these steps:

- Step 1** Display the Specify Batch Service Objective panel.

Figure 4-15 shows the panel that is displayed for the ALLBAT workload.

Figure 4-15 Specify Batch Service Objective Panel for ALLBAT

```

BMC Software ----- SPECIFY BATCH SERVICE OBJECTIVE -----
COMMAND ==> _

Workload   - ALLBAT
Description - All Batch Address Spaces

Turnaround time of ==> 20      minutes
                for ==> 50      % of all jobs
                and  ==> 45      minutes
                for ==> 80      % of all jobs

                Between ==> 08:00 (Begin time hh:mm)
                and ==> 17:00 (End time hh:mm)

JES queue time      ==> N      (Y/N, Include queue time in turnaround time)

Enter END when all entries are complete.
Enter DELETE to delete service objectives.
Enter CANCEL to cancel service objective specification.

```

Note: To reset all current objectives to 0, type **DELETE** on the **COMMAND** line.

Step 2 In the **Turnaround time** fields, type the required turnaround times and the percentage of all jobs that are to complete within those specified time periods.

Turnaround time is expressed in terms of minutes, from 0 to 9999.

Step 3 In the **Between** and **and** fields, type the time period for which the objectives are to be monitored, using the format *hh:mm*, where *hh* is a value from 00 to 23.

The default is from 00:00 to 00:00, which means that the workload's service objectives are not monitored and do not appear on either the **WOBJ** or the **WOBJS** views.

Note: If you specified **INACTV** in the **Initial status** field on the workload characterization panel, be sure to activate data collection *before* the **MAINVIEW** for OS/390 product begins monitoring the workload's service objectives.

For example, if you want **MAINVIEW** for OS/390 to monitor the **WKLD** service objectives from 8:00 A.M. to 5:00 P.M., go to the **WKLIST** view and type the **S** line command on the line containing **WKLD1**. In the workload characterization panel, type **ACTIVE**, and make sure you do it before 8:00 A.M. If you do not, **MAINVIEW** for OS/390 will not collect data for **WKLD1** and thus will not have any information for **WOBJ**, **WTA**, or any other workload-related views.

Step 4 To include **JES** input queue time in the measure of overall turnaround time (rather than just execution time), type **Y** in the **JES queue time** field.

Step 5 When finished, perform *one* of the following tasks:

- Type **END** to return to **WKLIST** and save the objectives automatically.
- Type **CANCEL** to exit the panel without saving the objectives.

TSO Workload Service Objectives

To set service objectives for a TSO workload, follow these steps:

Step 1 Display the Specify TSO Service Objective panel.

Figure 4-16 shows the panel that is displayed for the ALLTSO workload.

Figure 4-16 Specify TSO Service Objective Panel for ALLTSO

```

BMC Software ----- SPECIFY TSO SERVICE OBJECTIVE -----
COMMAND ==> _

Workload      - ALLTSO
Description   - All TSO Address Spaces

Response time of ==> 1      seconds
                for ==> 90   % of all transactions
                and   ==> 2      seconds
                for ==> 99   % of all transactions

                Between ==> 08:00 (Begin time hh:mm)
                and   ==> 17:00 (End time hh:mm)

Enter END when all entries are complete.
Enter DELETE to delete service objectives.
Enter CANCEL to cancel service objective specification.

```

Note: To reset all current objectives to 0, type **DELETE** on the **COMMAND** line.

Step 2 In the **Response time of** field, type the acceptable response time, in seconds, for a percentage of all transactions completed.

The response time can contain up to four characters, including a decimal point, and can be expressed in terms of whole seconds or fractions of seconds. Valid examples include

```

1
.08
5.05
3000

```

Step 3 In the **for** field immediately following the **Response time of** field, specify a percent of the total transactions to be completed within the previously entered time period.

Step 4 Enter an additional response time and percentage of total transactions in the next two fields.

Note: BMC Software recommends that you specify the first response time as the minimum-accepted response time for the majority (but not all) of TSO jobs, and then specify the second response time as a longer time period covering a greater percentage of jobs, as shown in Figure 4-16 on page 4-28.

Step 5 In the **Between** and **and** fields, type the time period for which the objectives are to be monitored, using the format *hh:mm*, where *hh* is a value from 00 to 23.

The default is from 00:00 to 00:00, which means that the workload's service objectives are not monitored and do not appear on either the WOBJ or WOBJS views.

Note: If you specified **INACTV** in the **Initial status** field on the workload characterization panel, be sure to use the **R** command to activate data collection *before* MAINVIEW for OS/390 begins monitoring the workload's service objectives.

For example, if you want the MAINVIEW for OS/390 product to monitor the WKLD1 service objectives from 8:00 A.M. to 5:00 P.M., use the **R** line command for WKLD1 before 8:00 A.M. If you do not, MAINVIEW for OS/390 will not collect data for WKLD1 and thus will not have any information for WOBJ, WRT, or any other workload-related views.

Step 6 When finished, perform *one* of the following tasks:

- Type **END** to return to WKLIST and save the service objectives automatically.
- Type **CANCEL** to exit the panel without saving the objectives.

Checking the Results

After you have set your service objectives for a workload, you can use view WOBJ to see how well the system is meeting its objectives.

On the **COMMAND** line, type **WOBJ** to display the WOBJ view, as shown in Figure 4-17.

Figure 4-17 WOBJ View

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE (Vv.r.mm)MVMVS  -----
COMMAND  ==>>                                     SCROLL ==>> PAGE
CURR WIN ==>> 1          ALT WIN ==>>
Wl=WOBJ=====SYSC=====*****DDMMYYYY==HH:MM:SS=====MVMVS====D==44
C Workload Typ #AS      % Service Objective  Tran  Tran  Job  Jobs
- - - - - - - - - - -  0.....50.....100  Rate  Total Total  /Min
STCNRM  SCL  29 130.0 *****+
TEST1   TSO   4 106.5 *****+  0.42   25
TSONRM  SCL   4 101.0 *****+  0.42   25
STCLOW  SCL   6 100.0 *****+
BATNRM  SCL   2 100.0 *****+
SYSTEM  SCL  15 77.00 *****
STC     WKL  40 46.00 *****
SYSTEM  WKL  33 26.00 *****
TSO     WKL   4 25.00 *****          0.42   25
BATCH   WKL   2 25.00 *****
STCPAS  SCL   4  0.00
STCPROD SCL   1  0.00
CICSHOT SCL    0.00
BATHOT  SCL    0.00
STCSYS  SCL    0.00
SYSSTC  SCL  18  0.00

```

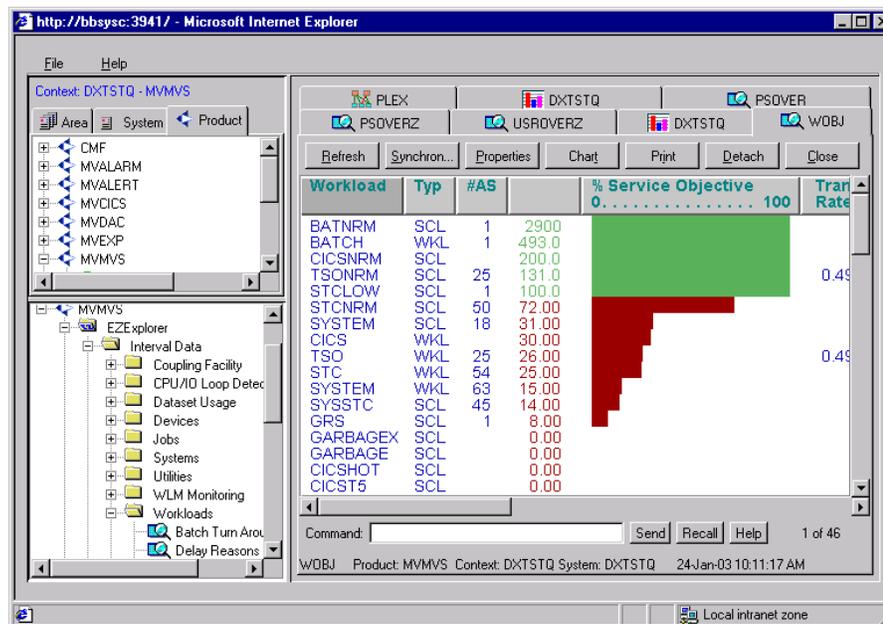
WOBJ shows you what percentage of the service-level objectives was met during the past interval. One row of data is displayed for each workload for which service-level objectives have been set. In the example, STCNRM is very successful, meeting its service-level objectives by 130 percent, while TSO has been able to meet only 25 percent of its objectives.

If a workload is consistently falling far short of its objectives, make the following checks:

- Hyperlink on the workload name, which takes you to JDELAY so that you can see if any address spaces in the workload are delayed.
- Review the workload's service-level objectives in WKLIST to make sure that they are realistic.
- Reorganize your address spaces into different workloads. (For example, if a few jobs use many resources compared to the others in that workload, consider moving the resource-consuming jobs into a separate workload with separate objectives.)

Note: If MAINVIEW Explorer is installed on your system, you can access MAINVIEW for OS/390 views through a web browser. For example, Figure 4-18 illustrates the WOBJ view accessed in this manner. Refer to *Using MAINVIEW* for information about using MAINVIEW Explorer to access MAINVIEW products.

Figure 4-18 WOBJ View Accessed Using MAINVIEW Explorer



Examples

This section contains examples to help you understand how to define workloads and establish service objectives for them.

The steps for creating workload definitions are essentially the same, regardless of the workload type:

1. Specify the name, type, and description for the workload on the Add Workload panel.
2. Specify selection criteria on the workload characterization panel.
3. Establish service objectives for the workload (except for started task workloads).

The following step-by-step examples show you how to create three different types of workloads: TSO, batch, and composite.

Example 1: Creating a TSO Workload

Suppose you want to create a workload that will monitor all TSO transactions in the Accounting department as a single entity. You might want to use WKLIST to accomplish this goal.

- Step 1** Display the WKLIST view.
- Step 2** On the **COMMAND** line, type **ADD** to display the Add Workload panel.

Figure 4-19 Add Workload Panel

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ==> _                               SCROLL ==> CSR

Enter Workload Name, Type and Description.

Name           ==>
Type           ==>          (ASCH, BAT, OMVS, STC, TSO, COMP)
Description    ==>

Press END when all entries are complete.
Enter CANCEL to CANCEL request.

```

Step 3 In the **Name** field, type a descriptive name for the workload—for example, ACCTTSO.

Step 4 In the **Type** field, type TSO.

The workload will contain only TSO address spaces.

Step 5 In the **Description** field, type a description for the workload.

Descriptions appear on the WKLIST view to help you identify the contents of each workload.

Your screen now looks like Figure 4-20.

Figure 4-20 Completed Add Workload Panel

```
BMC Software ----- ADD WORKLOAD -----
COMMAND ==> _                               SCROLL ==> CSR

Enter Workload Name, Type and Description.

Name           ==> ACCTTSO
Type           ==> TSO (ASCH, BAT, OMVS, STC, TSO, COMP)
Description    ==> Acct TSO users

Press END when all entries are complete.
Enter CANCEL to CANCEL request.
```

Step 6 Press **END** to display the Characterize TSO Workload panel, as shown in Figure 4-21 on page 4-34.

Figure 4-21 Characterize TSO Workload Panel for ACCTTSO

```

BMC Software ----- CHARACTERIZE TSO WORKLOAD-----
COMMAND ==> _
Enter 0 to specify workload service objectives

Workload      - ACCTTSO
Description   - Acct TSO Users

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

  Userid          ==> *
  Perf. group     ==>
  Service class   ==>

Accounting Information
  Data           ==>
  Field # ==>      Offset ==>
  I/E           ==>      (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 7 Look at the fields on this panel:

- The contents of the **Workload** and **Description** fields are simply what you specified on the Add Workload panel.
- The default value in the **Initial Status** field is ACTIVE, meaning that MAINVIEW for OS/390 will begin collecting data for ACCTTSO as soon as the product is initialized. As long as this status remains ACTIVE, you can use workload activity and workload delay views to track the progress of ACCTTSO through the system. (To change the status later, use the S command as described in “Changing Name, Description, and Current Status” on page 6-2.)
- You can use the next few fields to specify selection criteria for ACCTTSO. To create ACCTTSO, MAINVIEW for OS/390 scans through each TSO address space and tries to find a match with what you specify in these fields. If a match is found, that address space is included in the workload.

If every TSO user ID in Accounting had something in common—for example, they all began with the letter A—you could specify A* in the **Userid** field to ensure that only Accounting TSO IDs were included in ACCTTSO.

Similarly, if every TSO user in Accounting belonged to the same performance group, you could simply specify that number in the **Perf. group** field.

However, in most cases the members of a department are identified by a unique accounting code. You can type this code in the **Accounting Information** fields. The MAINVIEW for OS/390 product compares the code to the information in the ACCT keyword that is specified on the JOB or EXEC statement to try to find a match.

Step 8 In the **Data** field, type **ACCTNG**.

(Assume that ACCTNG is the data string that is common to all members of the Accounting department at your company.)

Step 9 Because this data string appears in the fifth field of the JCL JOB statement, type **5** in the **Field #** field.

Step 10 Because the character string begins at offset 2, type **2** in the **Offset** field.

Step 11 To *include* all jobs into the workload that match this data string, type **I** (Include) in the **I/E** field.

The screen now looks like Figure 4-22.

Figure 4-22 Completed Characterize TSO Workload Panel

```

BMC Software ----- CHARACTERIZE TSO WORKLOAD-----
COMMAND ==> _
Enter 0 to specify workload service objectives

Workload   - ACCTTSO
Description - Acct TSO Users

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

  Userid           ==> *
  Perf. group      ==>
  Service class    ==>

Accounting Information
  Data            ==> ACCTNG
  Field #         ==> 5   Offset ==> 2
  I/E             ==> I   (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 12 On the **COMMAND** line, type **O** and press **Enter**.

The TSO Service Objective Specification panel is displayed, on which you can set service objectives for ACCTTSO, as well as specify the time period during which you want the MAINVIEW for OS/390 product to monitor your new workload, as shown in Figure 4-23 on page 4-36.

Figure 4-23 TSO Service Objective Specification Panel

```

BMC Software ----- TSO SERVICE OBJECTIVE SPECIFICATION -----
COMMAND ==> _

Workload   - ACCTTSO
Description - Acct TSO Users

Response time of ==> 0      seconds
              for ==> 0      % of all transactions
              and  ==> 0      seconds
              for ==> 0      % of all transactions

              Between ==> 00:00 (Begin time hh:mm)
              and    ==> 23:59 (End time hh:mm)

Enter END when all entries are complete.
Enter DELETE to delete service objectives.
Enter CANCEL to cancel service objective specification.

```

Step 13 Examine each group of fields:

- **Response time fields:** You can use these fields to specify the service-level objectives for the workload in terms that users themselves understand. Your service objectives for ACCTTSO might look something like this:

```

Response time of ==> 1      seconds
              for ==> 90     % of all transactions
              and  ==> 3      seconds
              for ==> 100    % of all transactions

```

These values tell MAINVIEW for OS/390 that you want 90 percent of all TSO transactions in this workload to complete in one second or less, and that you want 100 percent of all transactions to complete in no more than three seconds.

- **Begin and end time fields:** Your Accounting TSO users are mainly active between the hours of 7:00 A.M. and 8:00 P.M., so you type

```

Between      ==> 07:00 (Begin time hh:mm)
and         ==> 20:00 (End time hh:mm)

```

These values tell MAINVIEW for OS/390 to keep track of how well ACCTTSO is meeting its service objectives from 7:00 A.M. to 8:00 P.M. During this time, you will be able to use views like WOBJ and WRT to see how well ACCTTSO is meeting its objectives.

Step 14 Press **PF3** twice to exit the TSO Service Objective Specification panel and return to WKLIST, as shown in Figure 4-24.

Figure 4-24 WKLIST View Showing ACCTTSO

```

DDMMYYYY  HH:MM:SS  ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND  ===>
CURR WIN  ===> 1      ALT WIN  ===>
W1 =WKLIST===SYSC=====DDMMYYYY==HH:MM:SS=====MVMVS====D=====38
L Workload  Type Description              Istatus  Cstatus Obj  Begin End
-----
ACCTTSO    TSO  AcCTSO Users                      Active   Active YES  07:00  20:00
ALLASCH    ASCH All APPC Address Spaces             Active   Active NO   00:00  00:00
ALLBAT     BAT  All Batch Address Spaces                Active   Active NO   00:00  00:00
ALLOMVS    OMVS All Open MVS Address Spaces          Active   Active NO   00:00  00:00
ALLSTC     STC  All Started Tasks                       Active   Active NO   00:00  00:00
ALLTSO     TSO  All TSO Address Spaces                  Active   Active NO   00:00  00:00
ALLWKLDS   COMP All Address Spaces                   Active   Active NO   00:00  00:00
COMP01     COMP Test Workload                       Active   Active YES  08:00  17:00
HOTBATCH   PGRP Performance Group 6                 Active   Active NO   00:00  00:00
ENGBAT     BAT  All Engineering Batch Jobs              Active   Active NO   00:00  00:00
TRIVTSO    TSO  Trivial TSO Transactions                 Active   Active NO   00:00  00:00
SALETSO    TSO  All Sales TSO                           Active   Active NO   00:00  00:00
SALEBAT    BAT  All Sales Batch Jobs                     Inactv   Inactv NO   00:00  00:00
SALESTC    STC  All Sales Started Tasks                  Active   Active YES  08:00  17:00
ALLSALES   COMP All Sales                           Active   Active NO   00:00  00:00

```

As you can see, ACCTTSO has been added to WKLIST in alphabetical order by workload name. ACCTTSO remains on WKLIST until you delete it or change its name.

Other information that you can discern from WKLIST is as follows:

- The **Obj** field for ACCTTSO has a value of YES, which reflects the fact that you did indeed specify service objectives for the workload.
- The **Istatus** (Initial Status) field for ACCTTSO is *Active*, which means that MAINVIEW for OS/390 will begin collecting data for the workload as soon as the product itself becomes active—regardless of when *you* access the product.
- The **Cstatus** (Current Status) field is also *Active*, which means that MAINVIEW for OS/390 is currently collecting data for ACCTTSO.

Example 2: Creating a Batch Workload

Your next task is to create a workload to monitor all nightly batch updates that are submitted by the Accounting department between the hours of 7:00 P.M. and 6:00 A.M. These batch jobs are divided into four categories:

- jobs that finish in two minutes or less (initiator class A)
- jobs that finish in one hour or less (class B)
- jobs that finish in two hours or less and do not require a tape mount (class K)
- jobs that finish in more than two hours, or jobs that *do* require a tape mount (class Q)

Begin by examining each step that is involved in creating the first workload that contains jobs in initiator class A:

- Step 1** Display the WKLIST view.
- Step 2** On the **COMMAND** line, type **ADD** to display the Add Workload panel, as shown in Figure 4-25.

Figure 4-25 Add Workload Panel to Create a Batch Workload

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ====> _                               SCROLL ====> CSR

Enter Workload Name, Type and Description.

Name           ====>
Type           ====>          (ASCH, BAT, OMVS, STC, TSO, COMP)
Description    ====>

Press END when all entries are complete.
Enter CANCEL to CANCEL request.

```

- Step 3** Enter the following data:
- 3.A** In the **Name** field, type **ACCTCLSA**—to designate this workload as Accounting jobs running in class A.
- 3.B** In the **Type** field, type **BAT**—to identify the workload as a batch workload.
- 3.C** In the **Description** field, type a description of the workload.

Your screen looks like Figure 4-26.

Figure 4-26 Add Workload Panel for ACCTCLSA

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ===> _                               SCROLL ===> CSR

Enter Workload Name, Type and Description.

Name           ===> ACCTCLSA
Type           ===> BAT   (ASCH, BAT, OMVS, STC, TSO, COMP)
Description    ===> Acct jobs in class A 7pm-6am

Press END when all entries are complete.
Enter CANCEL to CANCEL request.

```

Step 4 Press PF3 (END) to display the Characterize Batch Workload panel, which looks like Figure 4-27.

Figure 4-27 Characterize Batch Workload Panel for ACCTCLSA

```

BMC Software ----- CHARACTERIZE BATCH WORKLOAD -----
COMMAND ===> _
Enter 0 to specify workload service objectives

Workload      - ACCTCLSA
Description   - Acct jobs in class A 7pm-6am

Initial status ===> ACTIVE (Initial collection status, Active/Inactv)

Specify the following selection criteria:

Jobname       ===> *
Job class     ===>
Perf. group   ===>
Service class ===>
Programmer name ===>

Accounting Information
Data         ===>
Field #     ===>   Offset ===>
I/E        ===>   (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

- Step 5** Look at the fields on this panel:
- The contents of the **Workload** and **Description** fields are what you specified on the Add Workload panel.
 - The default value in the **Initial Status** field is ACTIVE, meaning that MAINVIEW for OS/390 will begin collecting data for this workload as soon as the product itself is initialized.

However, for this workload, you are interested only in those jobs that are active between 7:00 P.M. and 6:00 A.M., so there is no need to collect data on Accounting batch jobs on an on-going basis.

- Step 6** Change this status to **INACTV**. MAINVIEW for OS/390 will not begin collecting data for ACCTCLSA until 7:00 P.M. (which you will specify later).

You can use the next few fields to specify selection criteria for ACCTCLSA.

- Step 7** In the **Job class** field, type **A** to select all batch jobs running in class A.

As in the preceding example, you need to type the appropriate accounting code in the **Accounting Information** fields to select only those batch jobs that are submitted by members of the Accounting department. Remember that the data you specify here is compared to the information about the ACCT keyword on the JCL JOB or EXEC statement.

- Step 8** In the **Data** field, type **ACCTNG**.

- Step 9** In the **Field #** field, type **5** to indicate that ACCTNG appears in the fifth field of the JCL JOB statement.

- Step 10** In the **Offset** field, type **2** to indicate the character string's position within the field.

- Step 11** To *include* all jobs into the workload that match the JCL JOB statement, type **I** (Include) in the **I/E** field.

The screen now looks like Figure 4-28 on page 4-41.

Figure 4-28 Completed Characterize Batch Workload Panel

```

BMC Software ----- CHARACTERIZE BATCH WORKLOAD -----
COMMAND ==> _
Enter 0 to specify workload service objectives

Workload      - ACCTCLSA
Description   - Acct jobs in class A 7pm-6am

Initial status ==> INACTV (Initial collection status, Active/Inactv)

Specify the following selection criteria:

Jobname       ==> *
Job class     ==> A
Perf. group   ==>
Service class ==>
Programmer name ==>

Accounting Information
Data         ==> ACCTNG
Field #      ==> 5   Offset ==> 2
I/E         ==> I   (Include/Exclude Address space if account data matches)

Enter END when all entries are complete.
Enter CANCEL to cancel workload characterization.

```

Step 12 On the **COMMAND** line, type **O** and press **Enter** to display the Specify Batch Service Objective panel, as shown in Figure 4-29.

Figure 4-29 Specify Batch Service Objective Panel

```

BMC Software ----- SPECIFY BATCH SERVICE OBJECTIVE -----
COMMAND ==> _

Workload      -
Description   -

Turnaround time of ==> 0      minutes
                  for ==> 0      % of all jobs
                  and ==> 0      minutes
                  for ==> 0      % of all jobs

                  Between ==> 00:00 (Begin time hh:mm)
                  and ==> 23:59 (End time hh:mm)

JES queue time   ==> N      (Y/N, Include queue time in turnaround time)

Enter END when all entries are complete.
Enter DELETE to delete service objectives.
Enter CANCEL to cancel service objective specification.

```

Step 13 Fill in each field as follows:

- **Turnaround time fields:** According to the specifications that were given at the beginning of this example, the jobs in ACCTCLSA should not take longer than two minutes to complete. Fill in the fields as follows:

Turnaround time of	====>	1	minutes
for	====>	90	% of all jobs
and	====>	2	minutes
for	====>	100	% of all jobs

These values tell the MAINVIEW for OS/390 product that 90 percent of the batch jobs in class A should complete in one minute and 100 percent should complete in no more than two minutes.

- **Begin and end time fields:** You want MAINVIEW for OS/390 to monitor ACCTCLSA between 7:00 P.M. and 6:00 A.M., so type

Between	====>	19:00	(Begin time hh:mm)
and	====>	06:00	(End time hh:mm)

- **JES queue time:** Keep the default value of N. (If you specify Y in this field, the amount of time that each job spends in a JES queue will be factored into how well the workload as a whole meets its service-level objectives.)

Step 14 Press **PF3** twice to exit the Specify Batch Service Objective panel and return to WKLIST.

ACCTCLSA is added to WKLIST in alphabetical order, which places it just before your other workload, ACCTTSO, as shown in Figure 4-30 on page 4-43.

Figure 4-30 WKLIST View with a Newly Created Workload

```

DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ==>                               SCROLL ==> CSR
CURR WIN ==> 1          ALT WIN ==>
W1=WKLIST=====CXTSTH==*=====DDMMYYYY==HH:MM:SS====MVMVS====D====53
C Workload Type Description                      Istatu  Cstatu  Obj  Begin  End
- - - - -
ACCTCLSA BAT  Acct jobs in class A 7pm-6am      Inactv  Inactv  YES  19:00  06:00
ACCTTSO TSO  Acct TSO User                        Active  Actvtv  NO   07:00  20:00
ALLASC ASCH All ASCH Address Spaces             Active  Active  NO   00:00  00:00
ALLBAT BAT  All Batch Address Spaces            Active  Active  NO   00:00  00:00
ALLOMVS OMVS All Open MVS Address Spaces        Active  Active  NO   00:00  00:00
ALLSTC STC  All Started Tasks                   Active  Active  NO   00:00  00:00
ALLTSO TSO  All TSO Address Spaces              Active  Active  NO   00:00  00:00
ALLWKLDS COMP All Address Spaces               Active  Active  NO   00:00  00:00
APPC WKLD APPC Workload                        Active  Active  YES  00:00  23:59
APPCHOT SCLS APPC Hot Transactions              Active  Active  YES  00:00  23:59
APPCNRM SCLS APPC Normal Transactions           Active  Active  YES  00:00  23:59
BATCH WKLD Batch Workloa                      Active  Active  YES  00:00  23:59
BATHAL SCLS Batch Hal Jobs                     Active  Active  YES  00:00  23:59
BATHOT SCLS Batch Hot Jobs                     Active  Active  YES  00:00  23:59
BATNRM SCLS Batch Normal Jobs                  Active  Active  YES  00:00  23:59
BATPROD SCLS Batch Production Jobs             Active  Active  YES  00:00  23:59
BPY3205 COMP test/3205                         Active  Inactv  NO   00:00  00:00

```

ACCTCLSA remains on WKLIST until you either delete it or rename it.

Other useful information about WKLIST is as follows:

- The **Obj** field for ACCTCLSA has a value of YES, which reflects the fact that you specified service objectives for the workload.
- The **Istatus** (Initial Status) field for ACCTCLSA is INACTV, which means that the MAINVIEW for OS/390 product will not collect data for the workload by default, but will collect only when you use the R command to start data collection.
- The **Cstatus** (Current Status) field is also INACTV. Because you want MAINVIEW for OS/390 to collect data for ACCTCLSA while its service objectives are active—from 7:00 P.M. to 6:00 A.M.—you must explicitly start collection activity by using the R (Rename) line command either at or before 7:00 P.M.

Now that you have created the first workload for Accounting's nightly batch updates, it should be a simple matter to create the other three workloads. The steps are exactly the same, except that you give each workload a different name (say, ACCTCLSB, ACCTCLSK, and ACCTCLSQ), specify different values in the **Job Class** field (B, K, and Q, respectively), and assign appropriate turnaround times to each workload.

When you have finished, WKLIST will look like Figure 4-31 on page 4-44.

Figure 4-31 WKLIST View after Creating Several New Workloads

```

DDMMYYYY  HH:MM:SS  -----  MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS  -----
COMMAND  ==>  _                               -SCROLL ==>  CSR
CURR WIN ==>  1          ALT WIN ==>
W1 =WKLIST==SYSC=====+=====DDMMYYYY==HH:MM:SS=====MVMVS====D=====28
L Workload  Type  Description                               Istatus Cstatus Obj Begin End
-----
ACCTCLSA  BAT  Acct jobs in class A 7pm-6am  Inactv Inactv  YES 19:00 06:00
ACCTCLSB  BAT  Acct jobs in class B 7pm-6am  Inactv Inactv  YES 19:00 06:00
ACCTCLSK  BAT  Acct jobs in class K 7pm-6am  Inactv Inactv  YES 19:00 06:00
ACCTCLSQ  BAT  Acct jobs in class Q 7pm-6am  Inactv Inactv  YES 19:00 06:00
ACCTTSO   TSO  Acct TSO Users                Active Actvtv NO 07:00 20:00
ALLASCH   ASCH  All APPC Address Space        Active Active  NO 00:00 00:00
ALLBAT    BAT  All Batch Address Spaces      Active Active  NO 00:00 00:00
ALLSTC    STC  All Started Tasks             Active Active  NO 00:00 00:00
ALL       TSO  All TSO Address Spaces        Active Active  NO 00:00 00:00
ALLWKLDS  COMP  All Address Spaces            Active Active  NO 00:00 00:00
COMP01    COMP  Test Workload                 Active Active  YES 08:00 17:00
HOTBATCH  PGRP  Performance Group 6           Active Active  NO 00:00 00:00
ENGBAT    BAT  All Engineering Batch Jobs    Active Active  NO 00:00 00:00

```

Example 3: Creating a Composite Workload

This next example shows you how to combine both TSO and batch workloads into a single composite workload that is devoted exclusively to Accounting.

For resource-planning purposes, you want to create a composite workload to track all of Accounting's system activity—both TSO and batch—as a single entity. Follow these steps:

- Step 1** Display the WKLIST view.
- Step 2** On the **COMMAND** line, type **ADD** to display the Add Workload panel, as shown in Figure 4-32 on page 4-45.

Figure 4-32 Create a Composite Workload Using Add Workload Panel

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ====> _                                SCROLL ====> CSR

Enter Workload Name, Type and Description.

Name          ====>
Type          ====>      (ASCH, BAT, OMVS, STC, TSO, COMP)
Description   ====>

Press END when all entries are complete.
Enter CANCEL to CANCEL request.

```

Step 3 Fill in each field as follows:

- To indicate that this workload tracks all Accounting activity, type **ACCTALL** in the **Name** field.
- To identify the workload as a composite workload, type **COMP** in the **Type** field.
- In the **Description** field, type a description of the workload, as shown in Figure 4-33.

Figure 4-33 Add Workload Panel for ACCTALL

```

BMC Software ----- ADD WORKLOAD -----
COMMAND ====> _                                SCROLL ====> CSR

Enter Workload Name, Type and Description.

Name          ====> ACCTALL
Type          ====> COMP (ASCH, BAT, OMVS, STC, TSO, COMP)
Description   ====> All Accounting work

Press END when all entries are complete.
Enter CANCEL to CANCEL request.

```

Step 4 Press **PF3 (END)** to display the Characterize Composite Workload panel, which looks like Figure 4-34.

Figure 4-34 Characterize Composite Workload Panel for ACCTALL

```

BMC Software ----- CHARACTERIZE COMPOSITE WORKLOAD -----
OPTION ==> _
Valid line commands are:          Valid options are:
D - Delete selected workload      A - Add workloads to this composite

Workload   - ACCTALL
Description - All Accounting work

Initial status ==> ACTIVE (Initial collection status, Active/Inactv)

The sum of all Weighting % fields must be 100. Current total = 0 %

      Name      Description      Weighting %
-----
***** BOTTOM OF DATA *****

```

Step 5 Look at the information on this panel:

- Like the other workload characterization panels, the contents of the **Workload** and **Description** fields are simply what you specified on the Add Workload panel.
- In addition, the default value in the **Initial Status** field is **ACTIVE**, which means that **MAINVIEW** for OS/390 will begin collecting data for this workload as soon as the product is initialized.
- The **Name**, **Description**, and **Weighting** fields will contain data after you select some workloads for ACCTALL.

Step 6 Because you want the **MAINVIEW** for OS/390 product to collect data for ACCTALL only during a specified time period, change the **Initial Status** value to **INACTV**.

Step 7 In the **OPTION** field, type **A** and press **Enter**.

The Composite Workload Characterization panel is displayed, which looks like Figure 4-35.

Figure 4-35 Composite Workload Characterization Panel

```

BMC Software ---- COMPOSITE WORKLOAD CHARACTERIZATION ----- ROW 1 OF 96
COMMAND ==>                                         SCROLL ==> CSR
Valid line commands are:
S - Select workload for inclusion

Workload      - COMP01
Description - Test composite workload

  S  Name          Description
-----
  ACCTCLSA  Acct jobs in class A 7pm-6am
  ACCTCLSB  Acct jobs in class B 7pm-6am
  ACCTCLSK  Acct jobs in class K 7pm-6am
  ACCTCLSQ  Acct jobs in class Q 7pm-6am
  ACCTTSO   Acct TSO Users
  ALLASCH   All APPC Address Spaces
  ALLBAT    All Batch Jobs
  ALLOMVS   All Open MVS Address Spaces
  ALLSTC    All Started Tasks
  ALLTSO    All TSO Address Spaces
  ALLWKLDS  All Address Spaces
  COMP01    Comp Test Workload

```

This panel lists all of the workloads on WKLIST.

Step 8 To include a workload into ACCTALL, type **S** next to the workload.

You are interested in only those workloads belonging to the Accounting department, so your screen should look like Figure 4-36 on page 4-48.

Figure 4-36 Add a Workload into ACCTALL

```

BMC Software ---- COMPOSITE WORKLOAD CHARACTERIZATION ----- ROW 1 OF 96
COMMAND ==>                                           SCROLL ==> CSR
Valid line commands are:
S - Select workload for inclusion

Workload      - COMP01
Description - Test composite workload

  S  Name          Description
-----
s  ACCTCLSA      Acct jobs in class A 7pm-6am
s  ACCTCLSB      Acct jobs in class B 7pm-6am
s  ACCTCLSK      Acct jobs in class K 7pm-6am
s  ACCTCLSQ      Acct jobs in class Q 7pm-6am
s  ACCTTSO       Acct TSO Users
    ALLASCH      All APPC Address Spaces
    ALLBAT       All Batch Jobs
    ALLOMVS      All Open MVS Address Spaces
    ALLSTC       All Started Tasks
    ALLTSO       All TSO Address Spaces
    ALLWKLDS     All Address Spaces
    COMP01       Comp Test Workload

```

Step 9 Press **Enter**.

Each selected line is flagged with an asterisk (*) to indicate that the workload has been selected.

Step 10 Press **PF3** to exit this panel and return to the first Characterize Composite Workload panel.

This panel now lists all of the selected workloads for ACCTALL, as shown in Figure 4-37 on page 4-49.

Figure 4-37 All Selected Workloads for ACCTALL

```

BMC Software ----- CHARACTERIZE COMPOSITE WORKLOAD -----
OPTION ==> _
Valid line commands are:          Valid options are:
D - Delete selected workload      A - Add workloads to this composite

Workload   - ACCTALL
Description - All Accounting work

Initial status ==> INACTV (Initial collection status, Active/Inactv)

The sum of all Weighting % fields must be 100. Current total = 0 %

      Name      Description      Weighting %
-----
ACCTCLSA  Acct jobs in class A 7pm-6am      0
ACCTCLSB  Acct jobs in class B 7pm-6am      0
ACCTCLSK  Acct jobs in class K 7pm-6am      0
ACCTCLSQ  Acct jobs in class Q 7pm-6am      0
ACCTTSO   Acct TSO Users                      0
***** BOTTOM OF DATA *****

```

Your next task is to assign a weighting factor to each workload so that the total is 100. The weighting factor tells MAINVIEW for OS/390 how much each individual workload counts towards the composite workload's overall performance.

For example, suppose you determine that you want to use the following criteria when establishing weighting factors:

- The TSO activity, monitored by ACCTTSO, is roughly twice as important as all of the combined batch workloads.
- The success of ACCTTSO in meeting its service objectives should count for at least 60 percent of how well ACCTALL is doing as a whole.
- All batch workloads are equally important.

Step 11 Assign weighting factors to each workload as follows:

- ACCTCLSA Acct jobs in class A 7pm-6am **8**
- ACCTCLSB Acct jobs in class B 7pm-6am **8**
- ACCTCLSK Acct jobs in class K 7pm-6am **8**
- ACCTCLSQ Acct jobs in class Q 7pm-6am **8**
- ACCTTSO Acct TSO Users **68**

For more information about how weighting factors work, turn to "How Weighting Factors Work" on page 4-51.

WKLIST should now look like Figure 4-38 on page 4-50.

Figure 4-38 WKLIST View with ACCTALL

```

DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ==> _                               SCROLL ==> CSR
CURR WIN ==> 1                               ALT WIN ==>
W1 =WKLIST==SYSC=====+=====DDMMYYYY==HH:MM:SS=====MVMVS====D=====15
L Workload  Type  Description                               Istatus Cstatus Obj Begin End
-----
ACCTALL    COM   All Accounting work                         Inactv  Inactv  YES 07:00 06:00
ACCTCLSA  BAT   Acct jobs in class A 7pm-6am                Inactv  Inactv  YES 19:00 06:00
ACCTCLSB  BAT   Acct jobs in class B 7pm-6am                Inactv  Inactv  YES 19:00 06:00
ACCTCLSK  BAT   Acct jobs in class K 7pm-6am                Inactv  Inactv  YES 19:00 06:00
ACCTCLSQ  BAT   Acct jobs in class Q 7pm-6am                Inactv  Inactv  YES 19:00 06:00
ACCTTSO   TSO   Acct TSO Users                               Active  Actv tv NO 07:00 20:00
ALLASCH   ASCH  All APPC Address Spaces                     Active  Active YES 07:00 20:00
ALLBAT    BAT   All Batch Address Spaces                    Active  Active NO 00:00 00:00
ALLOMVS   OMVS  All Open MVS AddressSpaces                  Active  Active YES 07:00 20:00
ALLSTC    STC   All Started Tasks                           Active  Active NO 00:00 00:00
ALLTS     TSO   All TSO Address Spaces                      Active  Active NO 00:00 00:00
ALLWKLDS  COMP  All Address Spaces                          Active  Active NO 00:00 00:00
COMP01    COMP  Test Workload                               Active  Active YES 08:00 17:00

```

ACCTALL remains on WKLIST until you either delete it or rename it.

Other useful information is as follows:

- The **Obj** field for ACCTALL has a value of YES, meaning that at least one of the constituent workloads of ACCTALL has service objectives established for it, which you know is true.
- The **Istatus** (Initial Status) field for ACCTALL is INACTV, meaning that MAINVIEW for OS/390 will not collect data for the workload by default.
- The **Cstatus** (Current Status) field is also INACTV. Because you want MAINVIEW for OS/390 to collect data for ACCTALL while its service objectives are active—from 7:00 A.M. to 6:00 A.M.—you must explicitly start collection activity by using the R (Rename) line command either at or before 7:00 A.M.

Note: Starting collection services for a composite workload automatically starts collection for its constituent workloads. However, the reverse is not true; even if the constituent workloads are currently active, you must still explicitly start a composite workload.

How Weighting Factors Work

Understanding how weighting factors and service objectives work for composite workloads can be tricky. The following questions and answers pertaining to the previous example might help.

- **How were the weighting factors selected in Step 11 on page 4-49?**

These weighting factors were selected on the basis of the previously stated criteria, as follows:

- ACCTTSO is assigned a weighting factor of 68 percent, roughly twice as much as all other workloads combined (32 percent), and at least 60 percent of ACCTALL's total weight.
- All batch workloads are equally important, worth 8 percent of ACCTALL's total weight.

- **What do the weighting factors mean?**

These weighting factors mean that even if three of the batch jobs are meeting 100 percent of their service objectives, but ACCTTSO is meeting only 20 percent, ACCTALL as a whole will not be doing well. Remember, ACCTTSO counts for a full 60 percent of ACCTTSO's total performance.

- **How will the service objectives of ACCTALL be monitored?**

A composite workload's service objectives are monitored according to the time periods that are specified by its constituent workloads. In this case, the service objectives for ACCTTSO are monitored from 7:00 A.M. to 8:00 P.M., while the objectives for the batch work are monitored from 7:00 P.M. to 6:00 A.M. Therefore, the service objectives of ACCTALL will be monitored from 7:00 A.M. to 6:00 A.M.

Chapter 5 Security

This chapter explains how to protect various components of the MAINVIEW for OS/390 product. For additional information about security, refer to *Implementing Security for MAINVIEW Products*. For specific information about SYSPROG services, refer to “Protecting CSMON and SYSPROG Services” on page 5-3 and *MAINVIEW SYSPROG Services User Guide and Reference*.

This chapter includes the following topics:

Protecting Views and Actions	5-2
Protecting CSMON and SYSPROG Services	5-3

Protecting Views and Actions

MAINVIEW works with your RACF, CA-TOP SECRET, or CA-ACF2 security package to control access to both view data and actions. Although *Implementing Security for MAINVIEW Products* fully explains how to use the security views and how they interact with your security package, there are a few things that you should understand now:

- MAINVIEW security is implemented through three views:
 - SERDEF

This view lists all of the current security resource definitions on your system and lets you modify them.
 - SERDEFL

This view lists all of the current security resource definitions on your system and lets you select or delete them.
 - SERDEFE

This view shows details of one current security resource definition and lets you change, enable, or disable security checking for that resource.
- When you display SERDEF, you will see that the MAINVIEW for OS/390 product has defined a separate resource rule for each of following items:
 - view data in general (Can the user see *any* data?)
 - data that is provided by each view table (Can the user see the views that belong to *this* particular view table?)
 - actions in general (Can the user use *any* actions?)
 - actions for a view table (Can the user perform any actions that are associated with *this* view table?)
 - each action (Can the user perform *this* particular action?)

- A *view table* is a family of views that display the same type of data. To find out which views are associated with a particular view table, see *Implementing Security for MAINVIEW Products*. Note that although individual actions can be secured, individual views cannot be secured. That is, when you grant or deny access to a view table, you grant or deny access to *all* views belonging to that table.
- With MAINVIEW security, you can add rules for MAINVIEW resources to your security package by using the default class and entity names for the resource. You can also change the class and entity names to conform to rules that you have already defined.

For example, assume that you already have rules defined for your security package to control access to a resource that is identified by class DATASET and entity name SYS1.PROCLIB. Suppose that you want to use the same rule to control access to the MAINVIEW Address Space Table Data. All you have to do is enter CHAnge next to the Address Space Table Data entity on SERDEF, and then change the class to DATASET and the entity to SYS1.PROCLIB. MAINVIEW now uses your SYS1.PROCLIB rules for Address Space Table Data.

Note: Console access is also restricted through the MAINVIEW security views. That is, if you want to prevent users from entering commands at the console, be sure to restrict the entity on the SERDEF view.

Protecting CSMON and SYSPROG Services

Misuse of the COMMON STORAGE MONITOR (CSMON) and SYSPROG utilities can be potentially destructive to your system, so access to these two utilities is usually restricted to a select group of users.

The following sections explain how to secure services of SYSPROG and CSMON:

- “Using the BBX SAF Interface” on page 5-4 explains how the BBX SAF security interface works.
- “Securing SYSPROG and CSMON by Using the MAINVIEW Security Interface” on page 5-5 explains how to secure the SYSPROG and CSMON services when used in the MAINVIEW for OS/390 environment by way of the MAINVIEW security interface.

- “Securing SYSPROG Services from Outside the MAINVIEW Environment” on page 5-12 explains where you can find information to secure the SYSPROG utility when used in the TSO, batch, or started task environment.

Warning! SYSPROG and CSMON services can be accessed through MAINVIEW for OS/390, through TSO as line commands, and in batch jobs and started tasks. To secure these services absolutely, you must secure SYSPROG by using the BBSEC member in SYS1.PARMLIB (the built-in BBX SAF interface).

Refer to *Implementing Security for MAINVIEW Products* for complete instructions about securing MAINVIEW for OS/390 components, including information about writing your own user exit to further customize your security scheme.

Using the BBX SAF Interface

The BBX SAF security interface provides access to your RACF, CA-TOP SECRET, or CA-ACF2 external security manager (ESM). The BBX SAF security interface is not part of the MAINVIEW architecture; it is used to secure BMC Software stand-alone products.

Access to your ESM *must* be achieved through the BBX SAF interface routine.

How the BBX SAF Interface Works

When you use the BBX SAF security interface to protect either COMMON STORAGE MONITOR functions or SYSPROG services, the MAINVIEW for OS/390 product uses the following security-checking logic:

1. MAINVIEW for OS/390 determines whether the type of service is *List* (which lists only system-resource information) or *Update* (which actually updates a system resource). Refer to BBSRC(ASTXA1SN) to determine which services are List and which services are Update.

Some services, like the APF system programmer service, have both List and Update functions. For these services, MAINVIEW for OS/390 examines the appropriate sub-operands to distinguish between a List request, such as APF (without operands), and an Update request, such as APF ADD.

2. MAINVIEW for OS/390 calls the BBX SAF security interface, which builds a resource name based on parameters in the SYS1.PARMLIB member BBSEC, the service name, and the service function (Update or List).
3. The ESM—RACF, CA-TOP SECRET, or CA-ACF2—uses its database to determine whether the user is allowed access to the resource.

Note: SYSPROG and CSMON use the same security interface, whether running stand-alone or within MAINVIEW for OS/390. Thus, a common set of resource name specifications suffices for all environments.

Securing SYSPROG and CSMON by Using the MAINVIEW Security Interface

You can use the MAINVIEW security interface to enable or disable security for the SYSPROG and CSMON utilities collectively—that is, you can either secure or not secure *all* SYSPROG and CSMON services. Individual services (ZAP, EXIT, and so on) cannot be secured by using this interface. For information about securing individual SYSPROG services, see *Implementing Security for MAINVIEW Products*.

This section explains how to use the MAINVIEW security interface to perform the following functions:

- enabling and disabling security for the SYSPROG and CSMON resource definitions
- changing the MAINVIEW resource definition for SYSPROG and CSMON services to correspond with a permit, profile, or rule that is already defined to your ESM

Warning! Security for most MAINVIEW resources is *enabled* by default when shipped.

If you are customizing MAINVIEW security for the first time and want to leave security for SYSPROG and CSMON services enabled, you do not need to perform the steps in “Enabling and Disabling Security for CSMON.”

Enabling and Disabling Security for CSMON

Because security for most MAINVIEW resources, including those resources for CSMON and SYSPROG services, is enabled by default, the following steps show you how to *disable* security for the CSMON services while leaving security intact for the SYSPROG services.

Step 1 Access the MAINVIEW for OS/390 product running on the system on which you want to secure the SYSPROG and CSMON utilities.

Step 2 Display the SERDEF view by issuing the following command on the **COMMAND** line:

```
SERDEF SUFFIX(nn)
```

where *nn* is the two-digit suffix of the security parameter library member that is being used by this instance of MAINVIEW for OS/390 (the target PAS).

Step 3 When the SERDEF view is displayed, scroll the cursor down until the MVMVS Primary Action - CSMON and MVMVS Primary Action - SYSPROG resources are visible. (See Figure 5-1.)

Figure 5-1 SERDEF View for Default (00) Member

```
DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mmm)MVMVS -----
COMMAND ==>                               SCROLL ==> PAGE
CURR WIN ==> 1          ALT WIN ==>
>W1 =SERDEF=====SJSXCTSM=*===== (00 BROWSE          )====MVMVS====D==125
CMD Description                               Enab Change Comment
--- -----
HSM Detail Data - Table Data                 Yes
MVScope CCW and I/O data - Table Data        Yes
MVScope I/O Interrupt - Table Data           Yes
Job Step - Table Data                         Yes
Logical Control Unit - Table Data            Yes
Lpar/Domain - Table Data                     Yes
Long Term Addr Space - Table Data            Yes
Long Term Device - Table Data                Yes
Long Term Summary - Table Data               Yes
MVScope Monitor Set - Table Data             Yes
MVMVS Consoles - Table Data                  Yes
MVMVS Consoles - Any Action                  Yes
MVMVS Consoles - Action - Command            Yes
MVMVS Consoles List - Table Data             Yes
MVMVS Primary Action - CSMON                  Yes
MVMVS DataSpace - Table Data                 Yes
MVMVS and MVScope Jsre - Any Action          Yes
MVMVS and MVScope Dsre - Any Action          Yes
MVMVS - Action - SToP a Monitor Set          Yes
MVMVS Primary Action - SYSPROG                Yes
```

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

This command causes the **Edit mode status** field on the window information line to change from (00 BROWSE) to (00 EDIT).

Note: You must be in Edit mode before you can enable or disable a resource.

Step 5 Move the cursor to the line command area of the MVMVS Primary Action - CSMON resource and type **DISable**, as shown in Figure 5-2.

Figure 5-2 Disabling Security for the MV390 Primary Action—CSMON Resource

```
DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>Wl =SERDEF=====SYSE====*===== (00 EDIT          )====MVMVS====D==123
CMD  Description                               Enab      Change Comment
----
HSM Detail Data - Table Data                   Yes
MVScope CCW and I/O data - Table Data          Yes
MVScope I/O Interrupt - Table Data            Yes
Job Step - Table Data                          Yes
Logical Control Unit - Table Data              Yes
Lpar/Domain - Table Data                      Yes
Long Term Addr Space - Table Data             Yes
Long Term Device - Table Data                 Yes
Long Term Summary - Table Data                Yes
MVScope Monitor Set - Table Data              Yes
MVMVS Consoles - Table Data                   Yes
MVMVS Consoles - Any Action                   Yes
MVMVS Consoles - Action - Command            Yes
MVMVS Consoles List - Table Data              Yes
DIS MVMVS Primary Action - CSMON              Yes
MVMVS DataSpace - Table Data                  Yes
MVMVS and MVScope Jsre - Any Action           Yes
MVMVS and MVScope Dsre - Any Action           Yes
MVMVS - Action - STOp a Monitor Set           Yes
MVMVS Primary Action - SYSPROG                Yes
```

Step 6 Press **Enter**.

Notice that the **Enab** field for the MV390 Primary Action - CSMON resource has changed from **Yes** to **No**, as shown in Figure 5-3 on page 5-8, and **MOD** now follows **EDIT** in the **Edit mode status** field on the window information line to indicate that a modification has been made.

Figure 5-3 Disabling the MV390 Primary Action—CSMON Resource

```

DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ==>                                     SCROLL ==> CSR
CURR WIN ==> 1          ALT WIN ==>
>W1 =SERDEF=====SYSE====*(00 EDIT   MOD   )====MVMVS====D==123
CMD  Description                                     Enab   Change Comment
---  -
HSM Detail Data - Table Data                         Yes
MVScope CCW and I/O data - Table Data                Yes
MVScope I/O Interrupt - Table Data                  Yes
Job Step - Table Data                                Yes
Logical Control Unit - Table Data                    Yes
Lpar/Domain - Table Data                             Yes
Long Term Addr Space - Table Data                    Yes
Long Term Device - Table Data                        Yes
Long Term Summary - Table Data                       Yes
MVScope Monitor Set - Table Data                     Yes
MVMVS Consoles - Table Data                          Yes
MVMVS Consoles - Any Action                           Yes
MVMVS Consoles - Action - Command                    Yes
MVMVS Consoles List - Table Data                     Yes
MVMVS Primary Action - CSMON                          No
MVMVS DataSpace - Table Data                          Yes
MVMVS and MVScope Jsre - Any Action                  Yes
MVMVS and MVScope Dsre - Any Action                  Yes
MVMVS - Action - STOp a Monitor Set                  Yes
MVMVS Primary Action - SYSPROG                       Yes

```

Step 7 To save your change, type **SAVE** on the **COMMAND** line.

Step 8 To reinstate security for this resource, type **E** (Enable) in the line command area of the MVMVS Primary Action - CSMON resource.

Note: To enable or disable security simultaneously for both the MVMVS Primary Action - CSMON and MVMVS Primary Action - SYSPROG resources, you can enable or disable the Default - Primary Actions (All Views) resource, which provides high-level control over CSMON and SYSPROG services.

Changing SYSPROG and CSMON Resource Definitions

You can use the MAINVIEW security interface to control access to MAINVIEW resources with permits, profiles, or rules that are already defined to your ESM.

The following steps show you how to utilize an existing permit, profile, or rule to secure the SYSPROG and CSMON utilities:

Step 1 Access the MAINVIEW for OS/390 product running on the system on which you wish to secure the SYSPROG and CSMON utilities.

Step 2 Display the SERDEF view by issuing the following command on the **COMMAND** line:

SERDEF SUFFIX(*nn*)

where *nn* is the two-digit suffix of the security parameter library member that is being used by this instance of MAINVIEW for OS/390 (the target PAS).

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

This action causes the **Edit mode status** field on the window information line to change from (00 BROWSE) to (00 EDIT).

Step 4 Move the cursor to the line command area of the Default - Primary Actions (All Views) resource, and type **CHAnge** as shown in Figure 5-4.

This resource provides high-level control over both the SYSPROG and CSMON services. When you change this resource definition, you are changing the individual resources that control access to these utilities.

Note: Implement changes to the Default - Primary Actions (All Views) resource only if you want to change both the CSMON and SYSPROG services collectively. To change only CSMON services, access the MVMVS Primary Action - CSMON resource; to change only SYSPROG services, access the MVMVS Primary Action - SYSPROG resource.

Figure 5-4 Issuing the CHAnge Command in the SERDEF View

```
DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ===>                                     SCROLL ===> CSR
CURR WIN ===> 1          ALT WIN ===>
>W1 =SERDEF=====SYSE====*===== (00 EDIT          )====MVMVS====D==123
  CMD Description                               Enab   Change Comment
-----
  Default - Table Data                          Yes
  Default - Any Table Actions                   Yes
CHA Default - Primary Actions (All Views)       Yes
  Default - Specific Table Action               Yes
  Any Action (MVMVS or CMF Views)              Yes
  Addr Space - Table Data                       Yes
  Addr Space across interval - Table Data      Yes
  Addr Space Device Use/Delay- Table Data      Yes
  Address Space Enq Use/Delay - Table Dat      Yes
  Address Space HSM Use/Delay - Table Dat      Yes
  Address Space JES Use/Delay - Table Dat      Yes
  Address Space MSG Use/Delay - Table Dat      Yes
  Addr Space in Workload - Table Data          Yes
  Address Space XCF Use/Delay - Table Dat      Yes
  Address Space XCFU Use/Delay - Table Da      Yes
  Channel Path - Table Data                    Yes
  Channel Path on LCU - Table Data             Yes
```

Step 5 Press **Enter**.

The Change Resource Authorization Definition panel is displayed, as shown in Figure 5-5.

Figure 5-5 Change Resource Authorization Definition Panel

```

----- CHANGE RESOURCE AUTHORIZATION DEFINITION -----
COMMAND ==>

Authorize === Default - Primary Actions (All Views)
Product === MVMVS          Type          === ACTION
Object  === #Default      Internal Object ===
Action  ===                Internal Action === ACTION
Fields  === N              Status       === Enabled
Parms   ===                -
        ===                -
        ===                -
        ===                -

Class   ==> $BBM
EntName ==> BBM.MVMVS.&CONTEXT.&INTACTION.PA
        ==>
        ==>

Intent  ==> READ
LogAuth ==> A          LogFail ==> A          (A - Allow, N - Never)
Comment ==>

Press End to change the resource authorization definition.

```

You can use this panel to change class name, entity name, access intent, or logging attributes for the Default - Primary Actions (All Views) resource.

If you have an existing permit, profile, or rule defined to your ESM that prohibits all users access to a group of resources, you can type the entity name for that group in the **EntName** field. When a user attempts to access this resource, the permit, profile, or rule that is defined to your ESM is used to determine whether access is granted or denied.

Note: Whatever values you change for the Default - Primary Actions (All Views) resource definition are changed automatically for the MVMVS Primary Action - CSMON and the MVMVS Primary Action - SYSPROG resources as well.

For this example, you have defined a permit, profile, or rule to your ESM that prohibits all users from accessing a group of resources, the entity name of which is **BBM.NOACCESS.ALLUSERS**.

Step 6 Move the cursor to the **EntName** field and type **BBM.NOACCESS.ALLUSERS**, as shown in Figure 5-6 on page 5-11.

Figure 5-6 Changing a MAINVIEW Resource Entity Name

```

----- CHANGE RESOURCE AUTHORIZATION DEFINITION -----
COMMAND ==>

Authorize === Default - Primary Actions (All Views)
Product   === MVMVS           Type           === ACTION
Object    === #Default       Internal Object ===
Action    ===                 Internal Action === ACTION
Fields    === N              Status       === Enabled
Parms     ===                 -
          ===                 -
          ===                 -
          ===                 -

Class     ==> $BBM
EntName   ==> BBM.NOACCESS.ALLUSERS
          ==>
          ==>
Intent    ==> READ
LogAuth   ==> A              LogFail ==> A          (A - Allow, N - Never)
Comment   ==>

Press End to change the resource authorization definition.

```

Step 7 After you have made this change, press **PF3 (END)** to return to the SERDEF view.

Notice that the appearance of this resource has changed, and the **EDIT** value on the window information line is now followed by **MOD** to indicate your modification.

Step 8 On the **COMMAND** line, type **SAVE** to save your changes.

Step 9 Recycle the CAS and, if necessary, recycle the PAS to activate your change in the security resource definition member.

Note: COMMON STORAGE MONITOR services cannot be secured through BBX SAF; they can only be secured as described in *Implementing Security for MAINVIEW Products*.

Securing SYSPROG Services from Outside the MAINVIEW Environment

For information about how to secure SYSPROG and CSMON services outside the MAINVIEW environment, please refer to *Implementing Security for MAINVIEW Products*.

Chapter 6 **Maintaining Workload Definitions**

This chapter explains how to manage workload definitions after they have been defined. This chapter includes the following topics:

Describing Workload Management Tasks	6-2
Changing Name, Description, and Current Status	6-2
Deleting a Workload Definition	6-3
Updating a Workload Definition	6-4

Describing Workload Management Tasks

Table 6-1 describes the tasks that you can perform from the WKLIST view. The **Cmd Type** column tells you whether to enter the command in the line command column (LINE) or on the COMMAND line (CMD).

Table 6-1 Tasks Performed from the WKLIST View

Task	Command	Cmd Type	More Information
add a workload definition	ADD	CMD	"Creating Workload Definitions" on page 4-6
delete a workload definition	D	LINE	"Deleting a Workload Definition" on page 6-3
change a workload's selection criteria or initial status	S	LINE	"Updating a Workload Definition" on page 6-4
specify service objectives for a workload	O	LINE	"Setting Service Objectives" on page 4-23

Assuming that you do not exit a dialog box by using the CANCEL command, all changes are saved automatically and will be in effect the next time that you access the product.

Note: Service class and WLM workloads are defined through WLM dialogs and thus are outside of the control of the MAINVIEW for OS/390 product. WKLIST cannot be used to modify or delete these types of workloads.

Changing Name, Description, and Current Status

To change a workload's name, description, or current status (ACTV or INACTV), follow these steps:

- Step 1** On the WKLIST view, type S (Select) in the line command column to the left of the workload name.
- Step 2** Press **Enter**.

You will get an update screen for the workload.
- Step 3** Type the new information over the existing values.

Step 4 Press **Enter**.

The list is re-sorted alphabetically to reflect any changed names.

Step 5 To permanently save the changes, type **SAVE** on the **COMMAND** line.

Deleting a Workload Definition

To delete a workload definition, follow these steps:

Step 1 On the WKLIST view, type **D** in the line command column.

The Confirm Delete Workload panel is displayed, as shown in Figure 6-1.

Figure 6-1 Confirm Delete Workload Panel

```
BMC Software ----- CONFIRM DELETE WORKLOAD -----  
COMMAND ==>>  
  
Workload Name: FIRSTBAT  
Type          : BAT  
Description   : First shift work  
  
INSTRUCTIONS:  
  
Press ENTER key to confirm delete request.  
  
Enter END command to cancel delete request.
```

Step 2 Press **Enter** to confirm the delete request, or type **END** to cancel it.

You are returned to the WKLIST view.

Note: Performance group, WLM, and service class workloads cannot be deleted through WKLIST.

Updating a Workload Definition

To update the selection criteria or initial status for a workload, follow these steps:

- Step 1** Display WKLIST.
- Step 2** In the line command column for the workload definition that you want to change, type S.

The workload characterization panel for that workload is displayed.

- Step 3** Make your changes according to the instructions in “Characterizing Workloads” on page 4-9.

Chapter 7 **Maintaining the Exception Monitor**

This chapter contains the information that you need to maintain a control statement member (a collection of one or more samplers) for use with the Exception Monitor.

For information about displaying messages, see the *MAINVIEW for OS/390 User Guide and Reference*.

This chapter includes the following topics:

Displaying the Exception Monitor Member List	7-2
Creating Control Statement Members	7-3
Deleting a Control Statement Member	7-6
Changing the Exception Monitor Interval	7-6
Displaying the List of Active Samplers	7-7
Updating a Control Statement Member	7-9

Displaying the Exception Monitor Member List

To create, delete, or update control statement members, begin with the Exception Monitor - Member List panel. To display this panel, follow these steps:

- Step 1** Display the EMSTAT view.
- Step 2** Place the cursor on the **Mem Name** field, and then press **Enter**.

The Exception Monitor - Member List panel is displayed, as shown in Figure 7-1.

Figure 7-1 Exception Monitor - Member List Panel

```

----- EXCEPTION MONITOR - MEMBER LIST ----- Row 1 of 5
OPTION ==>>>                                SCROLL ==>> PAGE
                                           PWSCPM00 ACTIVE

Valid line commands are:                    Valid OPTIONS are:
S - Select this member for update           C - Create new member
E - Execute AEWS with this member           A - Display/Update active AEWS
D - Delete this member from list            Samplers
                                           P - Stop AEWS sampling

Name      Description                        Last Modified   User
-----
PWSCPMJR  TEST MULTIPLE DEV SAMPLERS                MM/DD/YY 14:17  MAK1
PWSCPMJW  MONITOR SYSTEM PAGING                     MM/DD/YY 11:03  WEC2
PWSCPMMK  TSO ANALYSIS                              MM/DD/YY 08:30  IMS1
PWSCPMSU  test                                       MM/DD/YY 17:31  JAM1
PWSCPMMV  MVMVS Exception Samplers                 MM/DD/YY 10:03  WEC2
***** Bottom of data *****
    
```

The Exception Monitor - Member List panel displays all of the currently defined control statement members, their descriptions, the date they were last modified, and the user who created them. It also displays the current status of the Exception Monitor (ACTIVE or INACTIVE) in the upper right corner.

From the Exception Monitor - Member List panel, you can perform the tasks that are shown in Table 7-1 on page 7-3 by using the appropriate line command.

Table 7-1 Exception Monitor Member List Tasks

Task	Line Cmd	Option	More Information
create a control statement member		C	"Creating Control Statement Members" on page 7-3
delete a control statement member	D		"Deleting a Control Statement Member" on page 7-6
update a control statement member	S		"Updating a Control Statement Member" on page 7-9
display a list of active samplers		A	"Displaying the List of Active Samplers" on page 7-7
set new thresholds for active and inactive samplers	S (inactive)	A (active)	"Setting New Thresholds for a Sampler" on page 7-11
change the interval amount			"Changing the Exception Monitor Interval" on page 7-6
start the Exception Monitor	E		"Manually Starting and Stopping the Exception Monitor" on page 3-5
stop the Exception Monitor		P	"Manually Starting and Stopping the Exception Monitor" on page 3-5

Creating Control Statement Members

To create a new control statement member, follow these steps:

- Step 1** From the Exception Monitor - Member List panel, type **C** (Create) on the **OPTION** line to display the Sampler Selection panel, shown in Figure 7-2 on page 7-4.

From this panel, you can select the samplers that you want to include in the new member.

Figure 7-2 Sampler Selection Panel

```

----- EXCEPTION MONITOR - SAMPLER SELECTION - Row 1 to 5 of 53
OPTION  ===>                                SCROLL ===> PAGE
                                           PWSCPM00 ACTIVE
MEMBER SUFFIX  ===>          (Required, will be appended to PWSCPM)
DESCRIPTION    ===>

Valid line commands are:                    Valid OPTIONS are:
S - Select sampler information panel          L - Locate a sampler in the list
A - Add sampler to this member

  Sampler  Description
-----
ACPU      ADDRESS SPACE CPU SAMPLER
AIO       ADDRESS SPACE I/O UTILIZATION SAMPLER
AIOR      ADDRESS SPACE I/O RATE SAMPLER
APAG      ADDRESS SPACE PAGING SAMPLER
APGR      ADDRESS SPACE PAGING RATE SAMPLER
F1=HELP   F2=SPLIT   F3=END     F4=RETURN   F5=RFIND   F6=RCHANGE
F7=UP     F8=DOWN    F9=SWAP   F10=LEFT   F11=RIGHT
    
```

Step 2 In the **Member Suffix** field, type a one- or two-digit alphanumeric suffix of your choice.

MAINVIEW for OS/390 appends this suffix to the default prefix, PWSCPM.

Step 3 In the **Description** field, type a description that does not exceed 40 characters.

Step 4 Decide which samplers you want to include in the new control statement member.

Note: See the *MAINVIEW for OS/390 User Guide and Reference* for a description of each sampler and the warning messages that it produces.

To search for a sampler by name, type **L *sampler*** on the **COMMAND** line, where *sampler* is the sampler's name. The sampler is scrolled to the top of the screen.

Step 5 Select a sampler by performing *one* of the following tasks:

- To select a sampler *without changing the default thresholds*, type **A** (Add) next to the appropriate name, and press **Enter**.

SELECTED appears to the right of the sampler.

- To *set a threshold* for the sampler, type **S** (Sampler) next to the sampler name, and press **Enter**.

A sampler information panel for that sampler is displayed.

The sampler information panel for the ENQ Sampler is shown in Figure 7-3.

Figure 7-3 ENQ Sampler Information Panel

```

----- EMSTAT - ENQ Sampler -----
COMMAND ==>

                                More:      +
INTERVAL ==> 5      (Number of report intervals
                    between warnings)
MINUTES  ==> 2      (The number of minutes that an
                    enqueue conflict must exist for
                    a warning message to be issued)

Press ENTER to update parameters
      END to cancel update request

The ENQ sampler monitors enqueue conflicts and
issues a warning message when jobs have been
waiting for enqueued resources for more than a
specified interval.

F1=HELP      F2=SPLIT      F3=END      F4=RETURN
F5=RFIND     F6=RCHANGE    F7=UP      F8=DOWN

```

Step 6 Type the values that you want.

Use the **HELP** command if you need more information.

Step 7 To save your changes, press **Enter** (or press **END** to discard your changes and return to the Sampler Selection panel).

The sampler is now selected for inclusion into the new member.

Step 8 When you are finished adding samplers, press **END** to exit the Sampler Selection panel and return to the Exception Monitor - Member List panel.

Step 9 To start the Exception Monitor using the new member, use the **E** (Execute) command.

Note: If the Exception Monitor is already active, you must first use the **P** command to stop the Exception Monitor; then restart the Monitor by using the **E** command.

Deleting a Control Statement Member

Warning! Use the D command with caution; a confirmation panel does *not* appear.

To delete a control statement member, display the Exception Monitor - Member List panel and use the **D** (Delete) line command.

Changing the Exception Monitor Interval

As described in “Understanding the Exception Monitor” on page 3-2, the Exception Monitor gathers information on a given resource based on the interval that you specify on the associated sampler. The default interval is 30 seconds. Therefore, if you type CPU 2 in your PWSCPMxx control statement member, the Exception Monitor gathers information on CPU utilization every 2 intervals—or every 60 seconds.

You can change the length of the interval from the default interval of 30 seconds to anywhere from 5 to 60 seconds, using the INT parameter. If you issue more than one INT parameter, the last one issued affects all active samplers.

Suppose you used the Exception Monitor - Member List panel to construct a PWSCPMxx member consisting of the following samplers:

```
BIO 2
CQD 3
INT 45
CPU
DOM 2
INT 7
```

The first INT parameter, INT=45, is ignored. The Exception Monitor gathers information on each sampler as follows:

For This Sampler	Information Is Gathered
BIO	every 14 seconds (two 7-second intervals)
CQD	every 21 seconds (three 7-second intervals)
CPU	every 7 seconds
DOM	every 14 seconds (two 7-second intervals)

Displaying the List of Active Samplers

To find out what samplers are in the currently executing control statement member, follow these steps:

- Step 1** Display the EMSTAT view.
- Step 2** Place the cursor on the **Mem Name** field, and then press **Enter**.

The Exception Monitor - Member List panel is displayed, as shown in Figure 7-4.

Figure 7-4 Using Exception Monitor Member List to Display Samplers

```

DDMMYYYY HH:MM:SS ----- MAINVIEW WINDOW INTERFACE(Vv.r.mm)MVMVS -----
COMMAND ==>                                     SCROLL ==> PAGE
CURR WIN ==> 1          ALT WIN ==>
W1 =EMSTAT=====SYSD=====*=====DDMMYYYY==HH:MM:SS====MVMVS====D===1
C Mem Name Current  Total
-----
----- EXCEPTION MONITOR - MEMBER LIST ----- ROW 1 TO 5 of 5
OPTION ==>                                     SCROLL ==> PAGE
                                           PWSCPM00 ACTIVE

Valid line commands are:                    Valid OPTIONS are:
S - Select this member for update           C - Create new member
E - Execute AEWS with this member          A - Display/Update active AEWS
D - Delete this member from list           Samplers
                                           P - Stop AEWS sampling

Name      Description                          Last Modified  User
-----
PWSCPMJR  TEST MULTIPLE DEV SAMPLERS                  MM/DD/YY 14:17  MAK1
PWSCPMJW  MONITOR SYSTEM PAGING                       MM/DD/YY 11:03  WEC2
PWSCPMK   TSO ANALYSIS                                MM/DD/YY 08:30  IMS1
PWSCPMSU  test                                          MM/DD/YY 17:31  JAM1
PWSCPMV   MVMVS Exception Samplers                    MM/DD/YY 10:03  WEC2
***** Bottom of data *****

```

- Step 3** On the **OPTION** line, type **A**. (The A command is valid only when the Exception Monitor is active.)

The Active Samplers panel is displayed, as shown in Figure 7-5 on page 7-8.

Figure 7-5 Active Samplers Panel

```

----- EXCEPTION MONITOR - ACTIVE SAMPLERS -- Row 1 to 8 of 44
COMMAND ===>                                SCROLL ===> PAGE
                                                PWSCPM00 ACTIVE

Valid line commands are:
S - Select sampler information panel to modify parameters

Sampling member: PWSCPM00  -

  Name      Description
-----
ACPU      ADDRESS SPACE CPU SAMPLER
AIO       ADDRESS SPACE I/O UTILIZATION SAMPLER
AIOR      ADDRESS SPACE I/O RATE SAMPLER
APAG      ADDRESS SPACE PAGING SAMPLER
APGR      ADDRESS SPACE PAGING RATE SAMPLER
ASRV      ADDRESS SPACE SERVICE UNIT UTILIZATION SAMPLER
ASSR      ADDRESS SPACE SERVICE UNIT RATE SAMPLER
BCPU      BATCH CPU UTILIZATION SAMPLER
F1=HELP   F2=SPLIT   F3=END     F4=RETURN  F5=RFIND   F6=RCHANGE
F7=UP     F8=DOWN    F9=SWAP    F10=LEFT  F11=RIGHT
    
```

The Active Samplers panel lists all of the samplers that are defined for the currently active control statement member.

Step 4 Use the **S** line command to display the thresholds for any of the samplers and make changes to them, if desired.

Note: Any changes that are made from the Active Samplers list are saved and will be in effect the next time that you activate the control member statement.

Updating a Control Statement Member

After you have created a control statement member, you can update it by

- adding samplers to the member
- deleting samplers from the member
- setting new thresholds for samplers in the member

All control statement member updates are made from the Exception Monitor - Sampler List panel.

To display the Exception Monitor - Sampler List panel, follow these steps:

- Step 1** Display the Exception Monitor - Member List panel.
- Step 2** Type **S** next to the member that you want to update.

The Exception Monitor - Sampler List panel displays all of the samplers that are currently defined for that member. The sampler list for the PWSCPMCB member is shown in Figure 7-6.

Figure 7-6 Exception Monitor Sampler List

```

----- EXCEPTION MONITOR - SAMPLER LIST - PWSCPMJD - Row 1 of 20
OPTION  ===>                                SCROLL ===> PAGE
                                           PWSCPMCB ACTIVE

Valid line commands are:                    Valid options are:
S - Select sampler information panel        A - Add samplers to this member
D - Delete sampler from this member        E - Start AEW with this member

DESCRIPTION ===> new sampler

Sampler  Description
-----
ACPU     ADDRESS SPACE CPU SAMPLER
AIO      ADDRESS SPACE I/O UTILIZATION SAMPLER
APAG     ADDRESS SPACE PAGING SAMPLER
APGR     ADDRESS SPACE PAGING RATE SAMPLER
ASSR     ADDRESS SPACE SERVICE UNIT RATE SAMPLER
CHA      CHANNEL PATH UTILIZATION SAMPLER
CPU      CPU UTILIZATION SAMPLER
CSA      CSA AND SQA UTILIZATION SAMPLER
DEV      DEVICE BUSY SAMPLER
ENQ      ENQUEUE CONFLICT SAMPLER
JET      JOB ELAPSED TIME SAMPLER
LCQ      LOGICAL CHANNEL UTILIZATION SAMPLER
PAG      SYSTEM PAGING SAMPLER
PGQ      PAGE DATA SET I/O QUEUE DEPTH SAMPLER

```

From this panel, you can perform any of the following tasks:

- add a sampler (A)
- delete a sampler (D)
- set new thresholds for the sampler (S)
- start the Exception Monitor (E)

Adding a Sampler to a Member

To add a sampler to the member, follow these steps:

Step 1 From the Exception Monitor - Sampler List, type **A** on the **OPTION** line.

The EMSTAT - Sampler Selection panel is displayed. The sampler list for the PWSCPMCB member is shown in Figure 7-7.

Figure 7-7 Sampler Selection Panel for PWSCPMCB

```

----- EMSTAT - SAMPLER SELECTION - PWSCPMCB - Row 1 to 8 of 53
OPTION  ====>                                SCROLL ====> PAGE
                                           PWSCPMCB ACTIVE

Valid line commands are:                    Valid OPTIONS are:
S - Select sampler information panel        L - Locate a sampler in the list
A - Add sampler to AEWS member

-----
Sampler  Description
-----
ACPU     ADDRESS SPACE CPU SAMPLER                SELECTED
AIO      ADDRESS SPACE I/O UTILIZATION SAMPLER    SELECTED
AIOR     ADDRESS SPACE I/O RATE SAMPLER           SELECTED
APAG     ADDRESS SPACE PAGING SAMPLER             SELECTED
APGR     ADDRESS SPACE PAGING RATE SAMPLER        SELECTED
ASRV     ADDRESS SPACE SERVICE UNIT UTILIZATION  SELECTED
ASSR     ADDRESS SPACE SERVICE UNIT RATE SAMPLER  SELECTED
ASVT     ADDRESS SPACE VETCOR TABLE QUEUE MONITOR
F1=HELP  F2=SPLIT  F3=END    F4=RETURN  F5=RFIND  F6=RCHANGE
F7=UP    F8=DOWN   F9=SWAP   F10=LEFT  F11=RIGHT
    
```

Step 2 Complete Step 4 through Step 7 in “Creating Control Statement Members” on page 7-3.

Step 3 When you are finished, press **END** to exit the Sampler Selection panel and return to the Sampler List panel.

Step 4 To start the Exception Monitor using the member that you selected for update, type **E** in the line command field.

Note: If the Exception Monitor is already active, you must first return to the Exception Monitor - Member List panel and use the **P** command to stop the Exception Monitor; then restart the Monitor by using the **E** command.

Deleting Samplers from a Member

To delete a sampler from a member, type **D** next to the sampler on the Sampler List panel, and press **Enter**.

Setting New Thresholds for a Sampler

You can set new thresholds for any sampler in any member, whether the member is currently active or not.

To set new thresholds for a sampler, follow these steps:

Step 1 On the Sampler List panel, type **A** next to the active sampler or type **S** next to the inactive sampler for which you want to set new thresholds.

The sampler information panel for that sampler is displayed.

Step 2 Type the new values in the input fields.

Step 3 When finished, perform *one* of the following tasks:

- Press **Enter** to update the sampler with the new changes.

If the sampler is currently active, any changes are valid only as long as the sampler remains active.

- If you want to exit the panel without saving the changes, press **END** to return to the Sampler List panel as it was before you made any changes.

Appendix A Function Codes for Single-Node SAF Resource Rules

If you are using the single-node method for building SAF security resource rules, place two-character function codes in your security database to specify the services that you want to protect.

A complete list of the SYSPROG services and the corresponding function codes can be found in BBSRC(ASTXA1SN). Use the function codes *only* if you have specified OLDRULE=YES in member BBSEC. Refer to *Implementing Security for MAINVIEW Products* and the *MAINVIEW SYSPROG Services User Guide and Reference* for additional information about securing SYSPROG services and the COMMON STORAGE MONITOR.

Note: The function codes and the FUNCTION parameter that is found in BBSRC(AXTXA1SN) are *not* equivalent.

The following tables list the function codes that you use to protect COMMON STORAGE MONITOR services.

Table A-1 COMMON STORAGE MONITOR Services

To Protect	Use This Function Code
COMMON STORAGE MONITOR INITIALIZATION	IN
OVERVIEW service	OV
SUMMARY service	SU

Table A-2 Commands (Common Storage Summary Panel)

To Protect	Use This Function Code
OVER (OVERVIEW)	OV
STAT (STATUS)	ST

Table A-3 Commands (Common Storage Areas Panel)

To Protect	Use This Function Code
S (DISPLAY)	SS
A (ALTER)	AR
F (FREE)	FR

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.

action	Defined operation, such as modifying a MAINVIEW window, that is performed in response to a command. <i>See</i> object.
active window	Any MAINVIEW window in which data can be refreshed. <i>See</i> alternate window, current window, window.
administrative view	Display from which a product's management tasks are performed, such as the DSLIST view for managing historical data sets. <i>See</i> view.
ALT WIN field	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.
Alternate Access	<i>See</i> MAINVIEW Alternate Access.
alternate form	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.

alternate window	(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.
analyzer	(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.
application	(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.
application trace	<i>See</i> trace.
ASCH workload	Workload comprising Advanced Program-to-Program Communication (APPC) address spaces.
AutoCustomization	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.
automatic screen update	Usage mode wherein the currently displayed screen is refreshed automatically with new data at an interval you specify. Invoked by the ASU command.
batch workload	Workload consisting of address spaces running batch jobs.
BBI	Basic architecture that distributes work between workstations and multiple OS/390 targets for BMC Software MAINVIEW products.
BBI-SS PAS	<i>See</i> BBI subsystem product address space.
BBI subsystem product address space (BBI-SS PAS)	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"> • MAINVIEW AutoOPERATOR • MAINVIEW for CICS • MAINVIEW for DB2 • MAINVIEW for DBCTL • MAINVIEW for IMS Online • MAINVIEW for WebSphere MQ • MAINVIEW for WebSphere MQ Integrator • MAINVIEW SRM • MAINVIEW VistaPoint (for CICS, DB2, DBCTL, and IMS workloads)

BBPARM	<i>See</i> parameter library.
BBPROC	<i>See</i> procedure library.
BBPROF	<i>See</i> profile library.
BBSAMP	<i>See</i> sample library.
BBV	<i>See</i> MAINVIEW Alternate Access.
BBXS	BMC Software Subsystem Services. Common set of service routines loaded into common storage and used by several BMC Software MAINVIEW products.
border	Visual indication of the boundaries of a window.
bottleneck analysis	Process of determining which resources have insufficient capacity to provide acceptable service levels and that therefore can cause performance problems.
CA-Disk	Data management system by Computer Associates that replaced the DMS product.
CAS	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.
CFMON	<i>See</i> coupling facility monitoring.
chart	Display format for graphical data. <i>See also</i> graph.
CICSplex	User-defined set of one or more CICS systems that are controlled and managed as a single functional entity.
CMF MONITOR	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.
CMF MONITOR Analyzer	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.

CMF MONITOR Extractor

Component of CMF that collects performance statistics for CMF MONITOR Analyzer, CMF MONITOR Online, MAINVIEW for OS/390, and RMF postprocessor. *See* 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 WebSphere MQ.

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. <i>See</i> scope, service point, SSI context, target context.
CONTEXT command	Specifies either a MAINVIEW product and a specific target for that product (<i>see</i> target context) or a MAINVIEW product and a name representing one or more targets (<i>see</i> SSI context) for that product.
control statement	(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.
coupling facility monitoring (CFMON)	Coupling facility views that monitor the activity of your system's coupling facilities.
current data	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.
current window	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.
DASD	(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.
DASD ADVISOR	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.
data collector	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.

delta mode	(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.
DFSMS	(Data Facility Storage Management System) Data management, backup, and HSM software from IBM for OS/390 or z/OS mainframes.
DMR	<i>See</i> MAINVIEW for DB2.
DMS	(Data Management System) <i>See</i> CA-Disk.
DMS2HSM	<i>See</i> MAINVIEW SRM DMS2HSM.
DSO	(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.
EasyHSM	<i>See</i> MAINVIEW SRM EasyHSM.
EasyPOOL	<i>See</i> MAINVIEW SRM EasyPOOL.
EasySMS	<i>See</i> MAINVIEW SRM EasySMS.
element	(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.
element help	Online help for a field in a view. The preferred term is <i>field help</i> .
Enterprise Storage Automation	<i>See</i> MAINVIEW SRM Enterprise Storage Automation.
event	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.
Event Collector	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.
expand	Predefined link from one display to a related display. <i>See also</i> hyperlink.

extractor	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.
extractor interval	<i>See</i> collection interval.
fast path	Predefined link between one screen and another. To use the fast path, place the cursor on a single value in a field and press Enter . The resulting screen displays more detailed information about the selected value. <i>See also</i> hyperlink.
field	Group of character positions within a screen or report used to type or display specific information.
field help	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 PF1 (HELP). In some products, field help is accessible from the screen help that is displayed when you press PF1 .
filter	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.
fire	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.
fixed field	Field that remains stationary at the left margin of a screen that is scrolled either right or left.
FOCAL POINT	MAINVIEW product that displays a summary of key performance indicators across systems, sites, and applications from a single terminal.
form	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.
full-screen mode	Display of a MAINVIEW product application or service on the entire screen. There is no window information line. <i>Contrast with</i> windows mode.
global command	Any MAINVIEW window interface command that can affect all windows in the window area of a MAINVIEW display.

graph	Graphical display of data that you select from a MAINVIEW window environment view. <i>See also</i> chart.
hilevel	For MAINVIEW products, high-level data set qualifier required by a site's naming conventions.
historical data	(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. <i>See</i> 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	<p>(1) Preset field in a view or an EXPAND line on a display that permits you to</p> <ul style="list-style-type: none"> • access cursor-sensitive help • issue commands • link to another view or display <p>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. <i>See also</i> fast path.</p>
Image log	<p>Collection of screen-display records. Image logs can be created for both the BBI-SS PAS and the BBI terminal session (TS).</p> <p>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.</p> <p>The TS Image log is a single data set that wraps around when full.</p>
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	<p>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. <i>Contrast with</i> historical data.</p> <p>Note: If change is made to the workloads, a new interval will be started.</p> <p><i>See also</i> current data and real-time data.</p>
InTune	Product for improving application program performance. It monitors the program and provides information used to reduce bottlenecks and delays.
IRUF	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 IMFLEDIT. 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.
job activity view	Report about address space consumption of resources. <i>See</i> view.
journal	Special-purpose data set that stores the chronological records of operator and system actions.
Journal log	<p>Collection of messages. Journal logs are created for both the BBI-SS PAS and the BBI terminal session (TS).</p> <p>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.</p> <p>The TS Journal log is a single data set that wraps around when full.</p>
line command	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.
line command column	Command input column on the left side of a view or display. <i>Contrast with</i> COMMAND line.
Log Edit	In the MAINVIEW for IMS Offline program named IMFLEDIT, function that extracts transaction (X'FA') and program (X'F9') records from the IMS system log. IMFLEDIT also extracts certain records that were recorded on the system log by IMS. IMFLEDIT then formats the records into a file called the IMS Resource Utilization File (IRUF).
MAINVIEW	BMC Software integrated systems management architecture.

MAINVIEW Alarm Manager (MV ALARM)

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

See MAINVIEW for WebSphere MQ.

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 information for managing the IBM WebSphere Application Server for z/OS and OS/390 environment. At the user's option, information is displayed about multiple or single HTTP servers, WAS plug-ins, or J2EE/CORBA containers. The product also provides JVM profiling capability.

MAINVIEW for WebSphere MQ

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

MAINVIEW for WebSphere MQ Integrator

Licensed feature of MAINVIEW for WebSphere MQ that provides comprehensive configuration, administration, performance monitoring, and operations management capabilities for an IBM WebSphere MQ Integrator message broker network.

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	<i>See</i> MAINVIEW Alarm Manager.
MVAPI	<i>See</i> MAINVIEW Application Program Interface.
MVCICS	<i>See</i> MAINVIEW for CICS.
MVDB2	<i>See</i> MAINVIEW for DB2.
MVDBC	<i>See</i> MAINVIEW for DBCTL.
MVIMS	<i>See</i> MAINVIEW for IMS.
MVIP	<i>See</i> MAINVIEW for IP.
MVLNX	<i>See</i> MAINVIEW for Linux–Servers.
MVMQ	<i>See</i> MAINVIEW for WebSphere MQ or MAINVIEW for WebSphere MQ Integrator.
MVMVS	<i>See</i> 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	<i>See</i> MAINVIEW Storage Resource Manager (SRM).
MVSRMHSM	<i>See</i> MAINVIEW SRM EasyHSM.
MVSRMSGC	<i>See</i> MAINVIEW SRM SG-Control.
MVSRMSGD	<i>See</i> MAINVIEW SRM StorageGUARD.
MVSRMSGP	<i>See</i> MAINVIEW SRM StorageGUARD.
MVUSS	<i>See</i> MAINVIEW for UNIX System Services.
MVVP	<i>See</i> MAINVIEW VistaPoint.
MVVTAM	<i>See</i> MAINVIEW for VTAM.
MVWEB	<i>See</i> MAINVIEW for WebSphere Application Server.

nested help	Multiple layers of help pop-up windows. Each successive layer is accessed by clicking a hyperlink from the previous layer.
object	<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>
OMVS workload	Workload consisting of OS/390 OpenEdition address spaces.
online help	Help information that is accessible online.
OS/390 and z/OS Installer	BMC Software common installation system for mainframe products.
OS/390 product address space (PAS)	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.
parameter library	<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"> • the distributed parameter library, called BBPARM • a site-specific parameter library or libraries <p>These can be</p> <ul style="list-style-type: none"> • a library created by AutoCustomization, called UBBPARM • a library created manually, with a unique name
PAS	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).
performance group workload	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.
PERFORMANCE MANAGER	MAINVIEW for CICS online service for monitoring and managing current performance of CICS regions.

Performance Reporter (MVIMS)

MVIMS Offline component that organizes data and prints reports that can be used to analyze IMS performance.

Performance Reporter

Product component that generates offline batch reports. The following products can generate these reports:

- MAINVIEW for DB2
- MAINVIEW for CICS

Plex Manager

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.

pop-up display

Full-screen panel that displays additional information about a selected event in a detail trace.

pop-up window

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.

PRGP workload

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 IEAIPSxx 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.

Resource Monitor	Online data collection services used to monitor IMS resources and issue warnings when defined utilization thresholds are exceeded.
row	(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.
RxD2	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.
sample cycle	<p>Time between data samples.</p> <p>For the CMF MONITOR Extractor, this is the time specified in the extractor control statements (usually 1 to 5 seconds).</p> <p>For real-time data, the cycle is not fixed. Data is sampled each time you press Enter.</p>
sample library	<p>Data set consisting of members each of which contains one of the following items:</p> <ul style="list-style-type: none"> • sample JCL that can be edited to perform specific functions • macro that is referenced in the assembly of user-written services • sample user exit routine <p>There can be several versions:</p> <ul style="list-style-type: none"> • the distributed sample library, called BBSAMP • a site-specific sample library or libraries <p>These can be</p> <ul style="list-style-type: none"> • a library created by AutoCustomization, called UBBSAMP • a library created manually, with a unique name
sampler	Program that monitors a specific aspect of system performance. Includes utilization thresholds used by the Exception Monitor. The CMF MONITOR Extractor contains samplers.
SBBPROF	<i>See</i> profile library.
scope	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.

screen definition	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.
selection view	In MAINVIEW products, view displaying a list of available views.
service class workload	<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>
service objective	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.
service point	<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>
service request block (SRB)	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.
service select code	Code entered to invoke analyzers, monitors, and general services. This code is also the name of the individual service.
session	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.
SG-Auto	<i>See</i> MAINVIEW SRM SG-Auto.
SG-Control	<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.

SYSPROG services	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.
system resource	<i>See</i> object.
target	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.
target context	Single target/product combination. <i>See</i> context.
TASCOSTR	MAINVIEW for IMS Offline program that summarizes detail and summary IMS Resource Utilization Files (IRUFs) to be used as input to the offline components.
task control block (TCB)	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.
TCB	<i>See</i> task control block.
terminal session (TS)	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).
TDIR	<i>See</i> trace log directory.
threshold	Specified value used to determine whether the data in a field meets specific criteria.
TLDS	<i>See</i> trace log data set.
total mode	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.
trace	(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.

view help	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 PF1 (HELP).
window	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.
window information line	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.
window number	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.
window status	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.
window status field	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.
windows mode	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.
WLM workload	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.
workflow	Measure of system activity that indicates how efficiently system resources are serving the jobs in a workload.
workload	(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.
workload activity view	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

- abend 2-13
- active samplers
 - displaying 7-7
 - how affected 7-6
 - setting thresholds 7-4
- Active Samplers panel 7-8
- Add Workload panel 4-7, 4-9
- address spaces
 - in workload 4-8
 - selection criteria 4-5
- ASCH workload
 - characterizing 4-11
 - definition 4-3
 - selection criteria 4-12

B

- batch workload
 - changing name or current status 6-2
 - characterizing 4-12
 - creating 4-38 to 4-43
 - definition 4-3
 - example 4-38
 - including JES input queue time 4-27
 - procedure for characterizing 4-12
 - selection criteria 4-14

- batch workload (*continued*)
 - setting service objectives
 - begin and end time 4-42
 - description 4-24
 - example 4-41
 - JES queue time 4-42
 - procedures 4-26
 - turnaround time 4-42
- BBACTDEF 2-14
- BBDJST00 PARMLIB member 2-20
- BBMPAS, BBILIB member 2-4 to 2-11
- BBPARM members
 - BBDTMSDP 2-18
 - BBDTQRJO 2-18
- BBSAMP 2-15
- BBSECURE 2-14
- BBVDEF 2-14
- BBX SAF interface 5-4
- BBXS 2-16
- BMC Software, contacting ii

C

- CA-ACF2 5-4
- CA-TOP SECRET, security interface 5-2, 5-4
- central thresholds 1-2
- Change Resource Authorization Definition panel 5-10
- Characterize ASCH Workload panel 4-11
- Characterize Batch Workload panel 4-10
- Characterize Composite Workload panel 4-20
- Characterize OMVS Workload panel 4-15
- Characterize Performance Group (PGRP) Workload panel 4-23
- Characterize STC Workload panel 4-16
- Characterize TSO Workload panel 4-18
- characterizing workloads
 - ASCH 4-3, 4-11
 - batch 4-12
 - composite 4-19
 - OMVS 4-14
 - performance group 4-22
 - started task 4-16
 - TSO 4-17
- CMF MONITOR 1-2
- CMFCDSxx for DSO data 2-13
- CMFCPMxx 2-12

CMFDUMP 2-13
CMFIDSxx for DSO data 2-13
CMFIPMxx 2-13
CMFMSG 2-14
COMMON STORAGE MONITOR (CSMON)
 accessing 5-4
 activating 2-17
 changing resource definitions 5-8
 security
 disabling 5-6
 enabling 5-6
 function codes A-1
 introducing 5-3, 5-5
composite workload
 adding a workload 4-21
 changing name or current status 6-2
 characterizing 4-19
 creating 4-44 to 4-50
 definition 4-3
 deleting a workload 4-21
 example 4-44
 service objectives 4-21, 4-25, 4-51
 weighting factor 4-25, 4-49
console access 5-3
constituent workload 4-21
control statement member
 adding samplers 7-10
 creating 7-3
 definition 3-2
 deleting
 members 7-6
 samplers 7-11
 displaying active samplers 7-7
 Exception Monitor Member List panel 7-2
 PWSCPM00 3-4
 PWSCPMXA 3-2
 setting sampler thresholds 7-11
 updating 7-9
conventions, document and typographical xvii,
 xviii
copying
 Exception Monitor members 2-15
 optional parameter 2-18
 sample screen definitions 2-18
CSMON
 See COMMON STORAGE MONITOR
 (CSMON)

customer support iii
customizing MAINVIEW for OS/390 2-1

D

data collection
 job step 2-20
 long-term history 2-21
defining
 BBACTDEF 2-14
 BBVDEF 2-14
 CMFLOG 2-13
 CMFMSG 2-14
 HISTDS00 2-15
 HST1DS00 2-15
 PARMFILE 2-14
 PARMLIB 2-14
 security views 2-14
 service objectives 4-23
 workloads 4-3
documentation
 conventions xvii, xviii
 electronic, online help xvi
 online xvi
 related xiv

E

electronic documentation, online help xvi
EMSTAT view 3-5, 7-2
Exception Monitor
 See also control statement member, line
 command, sampler
 changing interval 7-6
 copying members 2-15
 description 3-2
 displaying warning messages 7-2
 Exception Monitor Member List panel 3-6,
 7-2
 interval 7-6
 monitoring 3-2
 starting
 automatically 3-4
 manually 3-5
 stopping 3-5

Explorer, view accessed using 4-31
Extractor JCL, DD statements 2-11 to 2-15
Extractor operating environment, specifying
2-16

F

function codes A-1

G

goal mode 4-4

H

HEADMOVE control statement 2-13

I

INT parameter 7-6
interface, ISPF, online help xvi
interval
 changing 7-6
 Exception Monitor samplers 7-6
IPM 2-16

J

JCL statements 2-11
job step data collection 2-20

L

line command
 Exception Monitor Member List
 A 7-10, 7-11
 C 7-3
 D 7-10, 7-11
 E 3-5, 7-10
 P 7-11
 S 7-4, 7-10

line command (*continued*)

 WKLIST view
 D 6-3
 S 6-2

long-term history data collection 2-21
LPARSTAT view 1-4
LPARTOT view 1-4

M

MAINVIEW Explorer, view accessed using
4-31
manual customization 2-1
messages, online MVS data set xiv
migration considerations 1-1
MVS support xiii
MVSPAS PROC 2-11

O

OMVS workload
 characterizing 4-14
 definition 4-3
 selection criteria 4-15
online documentation ?? to xvi
online help xvi
OS/390
 support xiii

P

PARM subparameters 2-11
PARMFILE 1-3
PARMLIB 2-14
PAS
 creating startup procedure 2-2
 EXEC 2-11
 MVSPAS proc statement 2-11
 sample JCL 2-11
performance group workload 4-22, 4-24
post-installation tasks 2-1
predefined workloads 4-4
product support iii

protecting
actions 5-2
COMMON STORAGE MONITOR
(CSMON) 5-3
SYSPROG 5-3
system programmer services 5-2
views 5-2
PWSCPM00 3-2, 3-4
PWSCPMXA 3-2

R

RACF 5-4
REGION parameter 2-11
related documentation xiv to xvi
release notes xvi
response time, setting 4-28

S

SAF security interface 5-4
sampler
active 7-8
adding to control statement member 7-10
changing intervals 7-6
currently active 7-9
definition 3-2
deleting from control statement member 7-9
setting thresholds 7-4, 7-8, 7-11
updating 7-11
sampler information panel 7-5
sampler selection panel 7-4
SAVE command 6-2
screen definition, copying 2-18
security
BBX SAF interface 5-4
changing/adding rules 5-3
CSMON services 5-3
default settings 5-5
ESM (external security manager) 5-4, 5-5
function codes for CSMAON A-1
how implemented for MAINVIEW 5-2

security (*continued*)
implementation
SERDEF view 5-2
SERDEFE view 5-2
SERDEFL view 5-2
list and update services 5-4
parameters in PAS startup procedure 2-14
SYSPROG services 5-4
selection criteria
accounting string 4-14, 4-34, 4-43
address spaces 4-5
job class 4-14, 4-40
job name 4-14
performance group 4-11 to 4-14, 4-16
programmer name 4-14
started task name 4-16
user ID 4-19
SERDEF view 5-2, 5-6
SERDEFE view 5-2
SERDEFL view 5-2
service class 4-24
service objective
assigning weighting factors 4-21
results 4-30
setting
batch workloads 4-26
composite workloads 4-22, 4-50
examples 4-36, 4-50
instructions for different types 4-23
performance group workloads 4-25
service class workloads 4-24
TSO workloads 4-28
WLM workloads 4-25
single-node resource rules A-1
special characters xviii
SSID 2-3
started task workload
changing name or current status 6-2
characterizing 4-16
definition 4-3
selection criteria 4-17
starting
Exception Monitor
automatically 3-4
manually 3-5
PAS (Product Address Space) 2-2, 2-11
STEPLIB 2-12

summarization types of SUM 1-2
support, customer iii
SYSPROG services
 accessing 5-4
 authorizing in TSO line mode 2-19
 changing resource definitions 5-8
 interface services 5-4
 security 5-3, 5-11, 5-12

T

technical support iii
threshold, setting with the Exception Monitor
 7-4, 7-8, 7-10
TIME parameter 2-11
TSO workloads
 changing name or current status 6-2
 characterizing 4-17
 creating 4-32, 4-32 to 4-37
 defining selection criteria 4-19
 definition 4-3
 example 4-32
 selection criteria 4-19
 setting service objectives
 begin and end time 4-36
 description 4-24
 procedure 4-28
 response time 4-36
typographical conventions xvii, xviii

U

UBBPARM library 2-15, 2-18
user exit 5-4
utilities, securing 5-3

V

view table 5-3

W

warning messages, displaying from the MVS
 console 3-3
weighting factor 4-21, 4-51
WKLIST view 4-3, 4-6, 6-2
WLM workload 4-4, 4-25
WOBJ view 4-30
workload
 See also names of workloads
 address space composition 4-8
 address space selection criteria 4-5
 advantages to customizing 4-2
 characterizing 4-9
 checking results 4-30
 definition
 adding 4-6
 examples 4-32
 maintaining 6-1
 saving in PARMFILE 6-2
 updating 6-2, 6-4
 deleting a definition 6-3
 key field 4-7
 management tasks 6-2
 modifying 6-2
 panels 4-10
 predefined 4-4
 types 4-3, 4-4
 unique identifier 4-7
 updating a definition 6-4

Z

z/OS support xiii

END USER LICENSE AGREEMENT NOTICE

BY OPENING THE PACKAGE, INSTALLING, PRESSING "AGREE" OR "YES" OR USING THE PRODUCT, THE ENTITY OR INDIVIDUAL ENTERING INTO THIS AGREEMENT AGREES TO BE BOUND BY THE FOLLOWING TERMS. IF YOU DO NOT AGREE WITH ANY OF THESE TERMS, DO NOT INSTALL OR USE THE PRODUCT, PROMPTLY RETURN THE PRODUCT TO BMC OR YOUR BMC RESELLER, AND IF YOU ACQUIRED THE LICENSE WITHIN 30 DAYS OF THE DATE OF YOUR ORDER CONTACT BMC OR YOUR BMC RESELLER FOR A REFUND OF LICENSE FEES PAID. IF YOU REJECT THIS AGREEMENT, YOU WILL NOT ACQUIRE ANY LICENSE TO USE THE PRODUCT.

This Agreement ("**Agreement**") is between the entity or individual entering into this Agreement ("**You**") and BMC Software Distribution, Inc., a Delaware corporation located at 2101 CityWest Blvd., Houston, Texas, 77042, USA or its affiliated local licensing entity ("**BMC**"). "**You**" includes you and your Affiliates. "**Affiliate**" is defined as an entity which controls, is controlled by or shares common control with a party. IF MORE THAN ONE LICENSE AGREEMENT COULD APPLY TO THE PRODUCT, THE FOLLOWING ORDER OF LICENSE AGREEMENT PRECEDENCE APPLIES: (1) WEB BASED LICENSE AGREEMENT WITH BMC, (2) WRITTEN LICENSE AGREEMENT WITH BMC, (3) SHRINK-WRAP LICENSE AGREEMENT WITH BMC PROVIDED WITH THE PRODUCT, AND (4) THIS ELECTRONIC LICENSE AGREEMENT WITH BMC. In addition to the restrictions imposed under this Agreement, any other usage restrictions contained in the Product installation instructions or release notes shall apply to Your use of the Product.

PRODUCT AND CAPACITY. "**Software**" means the object code version of the computer programs provided, via delivery or electronic transmission, to You. Software includes computer files, enhancements, maintenance modifications, upgrades, updates, bug fixes, and error corrections.

"**Documentation**" means all written or graphical material provided by BMC in any medium, including any technical specifications, relating to the functionality or operation of the Software.

"**Product**" means the Software and Documentation.

"**License Capacity**" means the licensed capacity for the Software with the pricing and other license defining terms, including capacity restrictions, such as tier limit, total allowed users, gigabyte limit, quantity of Software, and/or other capacity limitations regarding the Software. For licenses based on the power of a computer, You agree to use BMC's current computer classification scheme, which is available at <http://www.bmc.com> or can be provided to You upon request.

ACCEPTANCE. The Product is deemed accepted by You, on the date that You received the Product from BMC.

LICENSE. Subject to the terms of this Agreement, as well as Your payment of applicable fees, BMC grants You a non-exclusive, non-transferable, perpetual (unless a term license is provided on an order) license for each copy of the Software, up to the License Capacity, to do the following:

- (a) install the Software on Your owned or leased hardware located at a facility owned or controlled by You in the country where You acquired the license;
- (b) operate the Software solely for processing Your own data in Your business operations; and
- (c) make one copy of the Software for backup and archival purposes only (collectively a "**License**").

If the Software is designed by BMC to permit you to modify such Software, then you agree to only use such modifications or new software programs for Your internal purposes or otherwise consistent with the License. BMC grants You a license to use the Documentation solely for Your internal use in Your operations.

LICENSE UPGRADES. You may expand the scope of the License Capacity only pursuant to a separate agreement with BMC for such expanded usage and Your payment of applicable fees. There is no additional warranty period or free support period for license upgrades.

RESTRICTIONS: You agree to **NOT**:

- (a) disassemble, reverse engineer, decompile or otherwise attempt to derive any Software from executable code;
- (b) distribute or provide the Software to any third party (including without limitation, use in a service bureau, outsourcing environment, or processing the data of third parties, or for rental, lease, or sublicense); or
- (c) provide a third party with the results of any functional evaluation or benchmarking or performance tests, without BMC's prior written approval, unless prohibited by local law.

TRIAL LICENSE. If, as part of the ordering process, the Product is provided on a trial basis, then these terms apply: (i) this license consists solely of a non-exclusive, non-transferable evaluation license to operate the Software for the period of time specified from BMC or, if not specified, a 30 day time period ("**Trial Period**") only for evaluating whether You desire to acquire a capacity-based license to the Product for a fee; and (ii) Your use of the Product is on an AS IS basis without any warranty, and **BMC, ITS AFFILIATES AND RESELLERS, AND LICENSORS DISCLAIM ANY AND ALL WARRANTIES (INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT) AND HAVE NO LIABILITY WHATSOEVER RESULTING FROM THE USE OF THIS PRODUCT UNDER THIS TRIAL LICENSE ("Trial License").** BMC may terminate for its convenience a Trial License upon notice to You. When the Trial Period ends, Your right to use this Product automatically expires. If You want to continue Your use of the Product beyond the Trial Period, contact BMC to acquire a capacity-based license to the Product for a fee.

TERMINATION. This Agreement shall immediately terminate if You breach any of its terms. Upon termination, for any reason, You must uninstall the Software, and either certify the destruction of the Product or return it to BMC.

OWNERSHIP OF THE PRODUCT. BMC or its Affiliates or licensors retain all right, title and interest to and in the BMC Product and all intellectual property, informational, industrial property and proprietary rights therein. BMC neither grants nor otherwise transfers any rights of ownership in the BMC Product to You. Products are protected by applicable copyright, trade secret, and industrial and intellectual property laws. BMC reserves any rights not expressly granted to You herein.

CONFIDENTIAL AND PROPRIETARY INFORMATION. The Products are and contain valuable confidential information of BMC (“**Confidential Information**”). Confidential Information means non-public technical and non-technical information relating to the Products and Support, including, without limitation, trade secret and proprietary information, and the structure and organization of the Software. You may not disclose the Confidential Information to third parties. You agree to use all reasonable efforts to prevent the unauthorized use, copying, publication or dissemination of the Product.

WARRANTY. Except for a Trial License, BMC warrants that the Software will perform in substantial accordance with the Documentation for a period of one year from the date of the order. This warranty shall not apply to any problems caused by software or hardware not supplied by BMC or to any misuse of the Software.

EXCLUSIVE REMEDY. BMC’s entire liability, and Your exclusive remedy, for any defect in the Software during the warranty period or breach of the warranty above shall be limited to the following: BMC shall use reasonable efforts to remedy defects covered by the warranty or replace the defective Software within a reasonable period of time, or if BMC cannot remedy or replace such defective copy of the Software, then BMC shall refund the amount paid by You for the License for that Software. BMC’s obligations in this section are conditioned upon Your providing BMC prompt access to the affected Software and full cooperation in resolving the claim.

DISCLAIMER. EXCEPT FOR THE EXPRESS WARRANTIES ABOVE, THE PRODUCT IS PROVIDED “AS IS.” BMC, ITS AFFILIATES AND LICENSORS SPECIFICALLY DISCLAIM ALL OTHER WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. BMC DOES NOT WARRANT THAT THE OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR FREE, OR THAT ALL DEFECTS CAN BE CORRECTED.

DISCLAIMER OF DAMAGES. IN NO EVENT IS BMC, ITS AFFILIATES OR LICENSORS LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES RELATING TO OR ARISING OUT OF THIS AGREEMENT, SUPPORT, AND/OR THE PRODUCT (INCLUDING, WITHOUT LIMITATION, LOST PROFITS, LOST COMPUTER USAGE TIME, AND DAMAGE OR LOSS OF USE OF DATA), EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND IRRESPECTIVE OF ANY NEGLIGENCE OF BMC OR WHETHER SUCH DAMAGES RESULT FROM A CLAIM ARISING UNDER TORT OR CONTRACT LAW.

LIMITS ON LIABILITY. BMC’S AGGREGATE LIABILITY FOR DAMAGES IS LIMITED TO THE AMOUNT PAID BY YOU FOR THE LICENSE TO THE PRODUCT.

SUPPORT. If Your order includes support for the Software, then BMC agrees to provide support (24 hours a day/7 days a week) (“**Support**”). You will be automatically re-enrolled in Support on an annual basis unless BMC receives notice of termination from You as provided below. There is a free support period during the one year warranty period.

(a) **Support Terms.** BMC agrees to make commercially reasonable efforts to provide the following Support: (i) For malfunctions of supported versions of the Software, BMC provides bug fixes, patches or workarounds in order to cause that copy of the Software to operate in substantial conformity with its then-current operating specifications; and (ii) BMC provides new releases or versions, so long as such new releases or versions are furnished by BMC to all other enrolled Support customers without additional charge. BMC may refuse to provide Support for any versions or releases of the Software other than the most recent version or release of such Software made available by BMC. Either party may terminate Your enrollment in Support upon providing notice to the other at least 30 days prior to the next applicable Support anniversary date. If You re-enroll in Support, BMC may charge You a reinstatement fee of 1.5 times what You would have paid if You were enrolled in Support during that time period.

(b) **Fees.** The annual fee for Support is 20% of the Software’s list price less the applicable discount or a flat capacity based annual fee. BMC may change its prices for the Software and/or Support upon at least 30 days notice prior to Your support anniversary date.

VERIFICATION. If requested by BMC, You agree to deliver to BMC periodic written reports, whether generated manually or electronically, detailing Your use of the Software in accordance with this Agreement, including, without limitation, the License Capacity. BMC may, at its expense, perform an audit, at your facilities, of Your use of the Software to confirm Your compliance with the Agreement. If an audit reveals that You have underpaid fees, You agree to pay such underpaid fees. If the underpaid fees exceed 5% of the fees paid, then You agree to also pay BMC’s reasonable costs of conducting the audit.

EXPORT CONTROLS. You agree not to import, export, re-export, or transfer, directly or indirectly, any part of the Product or any underlying information or technology except in full compliance with all United States, foreign and other applicable laws and regulations.

GOVERNING LAW. This Agreement is governed by the substantive laws in force, without regard to conflict of laws principles: (a) in the State of New York, if you acquired the License in the United States, Puerto Rico, or any country in Central or South America; (b) in the Province of Ontario, if you acquired the License in Canada (subsections (a) and (b) collectively referred to as the “**Americas Region**”); (c) in Singapore, if you acquired the License in Japan, South Korea, Peoples Republic of China, Special Administrative Region of Hong Kong, Republic of China, Philippines, Indonesia, Malaysia, Singapore, India, Australia, New Zealand, or Thailand (collectively, “**Asia Pacific Region**”); or (d) in the Netherlands, if you acquired the License in any other country not described above. The United Nations Convention on Contracts for the International Sale of Goods is specifically disclaimed in its entirety.

ARBITRATION. ANY DISPUTE BETWEEN YOU AND BMC ARISING OUT OF THIS AGREEMENT OR THE BREACH OR ALLEGED BREACH, SHALL BE DETERMINED BY BINDING ARBITRATION CONDUCTED IN ENGLISH. IF THE DISPUTE IS INITIATED IN THE AMERICAS REGION, THE ARBITRATION SHALL BE HELD IN NEW YORK, U.S.A., UNDER THE CURRENT COMMERCIAL OR INTERNATIONAL, AS APPLICABLE, RULES OF THE AMERICAN ARBITRATION ASSOCIATION. IF THE DISPUTE IS INITIATED IN A COUNTRY IN THE ASIA PACIFIC REGION, THE ARBITRATION SHALL BE HELD IN SINGAPORE, SINGAPORE UNDER THE CURRENT UNCITRAL ARBITRATION RULES. IF THE DISPUTE IS INITIATED IN A COUNTRY OUTSIDE OF THE AMERICAS REGION OR ASIA PACIFIC REGION, THE ARBITRATION SHALL BE HELD IN AMSTERDAM, NETHERLANDS UNDER THE CURRENT UNCITRAL ARBITRATION RULES. THE COSTS OF THE ARBITRATION SHALL BE BORNE EQUALLY PENDING THE ARBITRATOR’S AWARD. THE AWARD RENDERED SHALL BE FINAL AND BINDING UPON THE PARTIES AND SHALL NOT BE SUBJECT TO APPEAL TO ANY COURT, AND MAY BE ENFORCED IN ANY COURT OF COMPETENT JURISDICTION. NOTHING IN THIS AGREEMENT SHALL BE DEEMED AS PREVENTING EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF

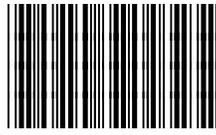
THE DISPUTE AS NECESSARY TO PROTECT EITHER PARTY'S CONFIDENTIAL INFORMATION, OWNERSHIP, OR ANY OTHER PROPRIETARY RIGHTS. ALL ARBITRATION PROCEEDINGS SHALL BE CONDUCTED IN CONFIDENCE, AND THE PARTY PREVAILING IN ARBITRATION SHALL BE ENTITLED TO RECOVER ITS REASONABLE ATTORNEYS' FEES AND NECESSARY COSTS INCURRED RELATED THERETO FROM THE OTHER PARTY.

U.S. GOVERNMENT RESTRICTED RIGHTS. The Software under this Agreement is "commercial computer software" as that term is described in 48 C.F.R. 252.227-7014(a)(1). If acquired by or on behalf of a civilian agency, the U.S. Government acquires this commercial computer software and/or commercial computer software documentation subject to the terms of this Agreement as specified in 48 C.F.R. 12.212 (Computer Software) and 12.211 (Technical Data) of the Federal Acquisition Regulations ("**FAR**") and its successors. If acquired by or on behalf of any agency within the Department of Defense ("**DOD**"), the U.S. Government acquires this commercial computer software and/or commercial computer software documentation subject to the terms of this Agreement as specified in 48 C.F.R. 227.7202 of the DOD FAR Supplement and its successors.

MISCELLANEOUS TERMS. You agree to pay BMC all amounts owed no later than 30 days from the date of the applicable invoice, unless otherwise provided on the order for the License to the Products. You will pay, or reimburse BMC, for taxes of any kind, including sales, use, duty, tariffs, customs, withholding, property, value-added (VAT), and other similar federal, state or local taxes (other than taxes based on BMC's net income) imposed in connection with the Product and/or the Support. This Agreement constitutes the entire agreement between You and BMC and supersedes any prior or contemporaneous negotiations or agreements, whether oral, written or displayed electronically, concerning the Product and related subject matter. No modification or waiver of any provision hereof will be effective unless made in a writing signed by both BMC and You. You may not assign or transfer this Agreement or a License to a third party without BMC's prior written consent. Should any provision of this Agreement be invalid or unenforceable, the remainder of the provisions will remain in effect. The parties have agreed that this Agreement and the documents related thereto be drawn up in the English language. Les parties exigent que la présente convention ainsi que les documents qui s'y rattachent soient rédigés en anglais.

SW Click EULA 071102

Notes



25727