

MAINVIEW[®] SRM Customization Guide

Version 7.2

June 20, 2003



Copyright 2003 BMC Software, Inc., as an unpublished work. All rights reserved.

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

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

Restricted Rights Legend

U.S. GOVERNMENT RESTRICTED RIGHTS. UNPUBLISHED -- RIGHTS RESERVED UNDER THE COPYRIGHT LAWS OF THE UNITED STATES. Use, duplication, or disclosure by the U.S. Government is subject to restrictions set forth in FAR Section 52.227-14 Alt. III (g)(3), FAR Section 52.227-19, DFARS 252.227-7014 (b) or DFARS 227.7202, as amended from time to time. 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	xi	
Chapter 1	Installation Overview	
	Introduction..... 1-2	
	Prerequisites	1-2
	System Software Requirements	1-2
	Space Requirements.....	1-4
	Authorization Requirements	1-4
	Product Authorization.....	1-4
	Installation Considerations	1-4
	Migrating from Earlier Versions	1-5
	Running with Other System Software	1-5
Chapter 2	MAINVIEW SRM AutoCustomization	
	Overview.....	2-2
	Customization Steps	2-5
	Step 1: Perform Administrative and Security Tasks.....	2-6
	Step 2: Copy Installation Parm Library to Your Library	2-10
	Step 3: Enter Site Size and MAINVIEW SRM Passwords	2-10
	Step 4: Build Work Files	2-12
	Step 5: Update MAINVIEW SRM Global Parameters	2-13
	Step 6: Build Application Collector Database	2-16
	Step 7: Build Performance Collector Database	2-16
	Step 8: Build Space Collector Database.....	2-17
	Step 9: Link Distributed Systems Collection Agent (optional)	2-18
	Step 10: Create Started Task Procedures	2-19
Chapter 3	Customization Tasks for MAINVIEW SRM Reporting Users	
	Task 1: Read the Critical Notes	3-1
	Task 2: Customize JCL for HSM Log Collection	3-1
	Task 3: Customize Execution JCL for Output Management	3-2
Chapter 4	Customization Tasks for PATROL Storage Manager Users	
	Task 1: Read the Critical Notes	4-2

Task 2: Install the PATROL Client Software	4-2
Task 3: Customize Distributed Systems Collection Agent Started Task	4-2
Task 4: Modify the Link-Edit JCL for TCP/IP	4-3
Task 5: Start the TCP/IP Transaction Scheduler	4-3

Chapter 5

Customization Tasks for MAINVIEW SRM Automation Users

Task 1: Read the Critical Notes	5-2
Task 2: Install AutoOPERATOR	5-2
Task 3: Set Up Predefined Solutions in AutoOPERATOR	5-2

Chapter 6

Verification Tasks for All MAINVIEW SRM Users

Task 1: Start the SVOS Started Task	6-2
Task 2: Start the MAINVIEW Interface	6-2
Task 3: Access MAINVIEW SRM	6-3
Task 4: Define a Pool	6-3
Task 4a: Define a Pool Definition Using IVPPOOL	6-3
Task 4b: Test the Pool Definitions Using IVPPOOL	6-4
Task 5: Test the Allocation Component	6-4
Task 5a: Test EasyPOOL Using DASDPOOL	6-4
Task 5b: Test StopX37/II Using SPACPRIM	6-6
Task 6: Test the Reporting Component	6-7
Task 6a: Initiate a VTOC Scan	6-7
Task 6b: Test the Space Collector Databases	6-8
Task 6c: Test the Performance Collector Databases	6-9
Task 6d: Test the Application Collector Database	6-9
Task 6e: Test the CDS Query	6-10
Task 6f: Test the HSM Log Extraction	6-11
Task 7: Test the Automation Component	6-12
Task 7a: Test Event Generation	6-12
Task 7b: Test AUTO Functions	6-13
Where to Go from Here	6-15

Appendix A

Migrating from Earlier Versions

Migration Considerations for All Users	A-2
MAINVIEW SRM Components	A-2
SVOS Started Task JCL	A-3
Backward Incompatibility	A-4
New SMMSYSxx Parameters	A-4
Changes to Batch Reporting	A-6
Migrating from Versions Earlier than 6.1	A-6
Changes Related to MAINVIEW Infrastructure	A-6
Sysplex Support	A-6
CLIST Changes	A-7
Migrating from AutoOPERATOR	A-8
Migrating from EasyHSM	A-9
Migrating from StorageGUARD	A-10
Changes to Data Collectors	A-10
Changes to the VTOC Scan Facility	A-10

Changes to StorageGUARD Versions Earlier than 6.1	A-11
Migrating from SG-Control	A-12
Upgrading Application Records	A-12
Migrating from Versions 4.1 and Later	A-12
Migrating from Version 3.1	A-13
Migrating from SG-Auto	A-13
Migrating from RESOLVE SRM Explorer.	A-13
Migrating from HIPER-CACHE	A-13

Appendix B

Migration Utilities

Application Collector SGCDBCNV Utility	B-2
Space Collector Copy/Merge Utility	B-2
Copy/Merge Processing Options	B-3

Index

List of Tables

Table 2-1	MAINVIEW SRM Customization Command Options	2-4
Table 2-2	Customization Steps	2-5
Table 2-3	Administrative and Security Tasks Checklist	2-6
Table 2-4	Work File Fields	2-12
Table 2-5	Required MAINVIEW SRM Global Parameters	2-14
Table 2-6	Application Collector Database Specifications	2-16
Table 2-7	Performance Collector Database Specifications	2-17
Table 2-8	Space Collector Database Specifications	2-18
Table 2-9	Distributed Systems Agent Specifications	2-18
Table A-1	New Product Names	A-2
Table A-2	New SMMSYSxx Global Parameters	A-4

About This Book

This book contains detailed customization information about MAINVIEW® Storage Resource Manager by BMC Software and is intended for storage administrators.

To use this book, you should be familiar with

- OS/390 or z/OS systems
- job control language (JCL)
- Interactive System Productivity Facility (ISPF)
- MAINVIEW Infrastructure

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

How This Book Is Organized

This book is organized as follows. In addition, an index appears at the end of the book.

Chapter/Appendix	Description
Chapter 1, "Installation Overview"	provides a system prerequisites and requirements
Chapter 2, "MAINVIEW SRM AutoCustomization"	provides a representation of AutoCustomization tasks
Chapter 3, "Customization Tasks for MAINVIEW SRM Reporting Users"	provides customization tasks for HSM users
Chapter 4, "Customization Tasks for PATROL Storage Manager Users"	provides customization tasks for PATROL users
Chapter 5, "Customization Tasks for MAINVIEW SRM Automation Users"	provides customization tasks for Automation users
Chapter 6, "Verification Tasks for All MAINVIEW SRM Users"	provides verification tasks

Chapter/Appendix	Description
Appendix A, "Migrating from Earlier Versions"	provides migration considerations
Appendix B, "Migration Utilities"	provides migration utilities

Related Documentation

BMC Software products are supported by several types of documentation:

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

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

Category	Document	Description
general	<i>MAINVIEW Products General Information</i>	provides an overview of the MAINVIEW environment and the products that it supports
MAINVIEW common documents	<i>OS/390 and z/OS Installer Guide</i> <i>MAINVIEW Installation Requirements Guide</i> <i>MAINVIEW Common Customization Guide</i> <i>Using MAINVIEW</i> <i>MAINVIEW Administration Guide</i> <i>Implementing Security for MAINVIEW</i>	provides instructions for installing, configuring, using, and administering MAINVIEW
MAINVIEW SRM core documents	<i>MAINVIEW SRM User Guide and Reference</i>	provides information common to all MAINVIEW SRM products and high-level navigation
reference documents	<i>MAINVIEW SRM Reference Summary</i>	provides a listing and explanation of global system parameters, FLST/RLST parameters, and functions for all MAINVIEW SRM products
messages	<i>MAINVIEW SRM Messages</i>	provides hardcopy of messages that are also available online

Category	Document	Description
product documents	<ul style="list-style-type: none"> • <i>MAINVIEW SRM Allocation EasyPOOL User Guide and Reference</i> • <i>MAINVIEW SRM Allocation EasySMS User Guide and Reference</i> • <i>MAINVIEW SRM Allocation StopX37/II User Guide and Reference</i> • <i>MAINVIEW SRM Automation User Guide</i> • <i>MAINVIEW SRM Reporting User Guide</i> • <i>MAINVIEW SRM Reporting Reference Manual</i> 	provide product-specific information for MAINVIEW SRM products
supplemental documents	release notes, flashes, technical bulletins	provides additional information about the product

Online and Printed Books

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

To Access Online Books

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

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

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

To Request Additional Printed Books

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

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.html>.

Conventions

This section provides examples of the conventions used in this book and explains how to read ISPF panel-flow diagrams and syntax statements.

General Conventions

This book uses the following general conventions:

Item	Example
information that you are instructed to type	Type SEARCH DB in the designated field.
specific (standard) keyboard key names	Press Enter .
field names, text on a panel	Type the appropriate entry in the Command field.
directories, file names, Web addresses	The BMC Software home page is at www.bmc.com .
nonspecific key names, option names	Use the Help function key. KEEPDICTIONARY option
MVS calls, commands, control statements, keywords, parameters, reserved words	Use the SEARCH command to find a particular object. The product generates the SQL TABLE statement next.
command options, database names	Use the sbacktrack program to create a backup script.

Item	Example
code examples, syntax statements, system messages, screen text	//STEPLIB DD The table <i>table_name</i> is not available.
emphasized words, new terms, variables	The instructions that you give to the software are called <i>commands</i> . In this message, the variable <i>file_name</i> represents the file that caused the error.
single-step procedures	>> To enable incremental backups, type y and press Enter at the next prompt.

This book uses the following types of special text:

Note: Notes contain important information that you should consider.

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

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

Syntax Statements

Syntax statements appear in Courier. The following example shows a sample syntax statement:

```
COMMAND KEYWORD1 [KEYWORD2|KEYWORD3] KEYWORD4={YES|NO}
      file_name...
```

The following table explains conventions for syntax statements and provides examples:

Item	Example
Items in italic type represent variables that you must replace with a name or value. Use an underscore for variables with more than one word.	dtbackup <i>control_directory</i>
Brackets indicate a group of options. You can choose at least one of the items in the group, but none of them is required. Do not type the brackets when you enter the option. A comma means that you can choose one or more of the listed options. You must use a comma to separate the options if you choose more than one option.	[<i>table_name, column_name, field</i>]
Braces enclose a list of required items. You must enter at least one of the items. Do not type the braces when you enter the item.	{ <i>DBD_name table_name</i> }

Item	Example
A vertical bar means that you can choose only one of the listed items. In the example, you would choose either <i>commit</i> or <i>cancel</i> .	{commit cancel}
An ellipsis indicates that you can repeat the previous item or items as many times as necessary.	<i>column_name</i> . . .

Chapter 1 Installation Overview

This chapter provides an overview of the customization process. The following topics are discussed:

Introduction	1-2
Prerequisites	1-2
System Software Requirements	1-2
Space Requirements	1-4
Authorization Requirements	1-4
Product Authorization	1-4
Installation Considerations	1-4
Migrating from Earlier Versions	1-5
Running with Other System Software	1-5

Introduction

The MAINVIEW Storage Resource Manager (SRM) uses the OS/390 and z/OS Installer to install and customize MAINVIEW SRM components. The OS/390 and z/OS Installer provides a consistent distribution, installation, customization, and maintenance process for integrated BMC Software products that execute on the OS/390 platform.

Part of the installation system is the Installation Checklist Generator, which enables you to select one or more products to install and compiles an integrated, customized checklist to guide you through the installation and customization process. See the *OS/390 and z/OS Installer Guide* for instructions for the Installation Checklist Generator.

Before you begin the customization, be sure to complete the pre-customization worksheet for a smooth customization process.

Prerequisites

Make sure that you meet the following prerequisites before you install MAINVIEW SRM.

System Software Requirements

To use MAINVIEW SRM, you need the following minimum system configuration. The operating system must be an IBM-supported version.

- OS/390 2.09 or later
- z/OS 1.1 or later
- MAINVIEW Infrastructure (MVI) 4.1.2 or later

MAINVIEW SRM Automation

To use MAINVIEW SRM Automation, you must have MAINVIEW AutoOPERATOR 6.1 *or later* active on your system.

If you are running AutoOPERATOR 6.1, you must have PTF BPO5425 applied to support job submission and skeleton tailoring using the AUTO function ACT_JOB keyword.

After the BPO5425 PTF is applied, the AutoOPERATOR subsystem requires a cold start and resetting of the AutoOPERATOR VPOOL. To accomplish this, restart the AutoOPERATOR subsystem with START=COLD,VPOOL=RESET keywords on the OS/390 START command.

Tape Reporting Facility

To use the tape reporting facility, you need one of the following tape library systems:

- CA1
- RMM
- CONTROL-T

Third Party Software

The EMC ResourcePak Base is required for MAINVIEW SRM to provide extended EMC support for EMC Symmetrix devices at micro-code level 5x68 or later. The SCF started task associated with EMC ResourcePak Base must be installed and active on each system on which MAINVIEW SRM is executed. If there are no EMC Symmetrix devices at micro-code level 5x68 or later, then the SCF started task and ResourcePak Base product are not required.

BMC Software suggests that you make the EMC ResourcePak Base SCF load library available to MAINVIEW SRM by including it in the link list, the LPA, or the STEPLIB DD concatenation of the SVOS and performance collector started tasks. If the load library is not available, MAINVIEW SRM uses an EMC module that is distributed with the MAINVIEW SRM libraries. The maintenance level of this module might be earlier than that of the module in the site library.

Warning! The EMC SymmAPI functions are not available when you run MAINVIEW SRM on a VM guest machine. When run on a VM guest, during start-up, MAINVIEW SRM issues a message to the SVOS job log that indicates that extended EMC data is unavailable.

Space Requirements

To use MAINVIEW SRM, you need the following minimum available space:

- Target Libraries: 100 cylinders
- Distribution Libraries: 70 cylinders
- Total Required DASD Storage: 170 cylinders

Tip: Space requirements are combined for you when you run the OS/390 and z/OS Installer.

- Virtual storage estimates: 80K CSA and 1099K ECSA

Authorization Requirements

You must grant user access to restricted programs or TSO commands as appropriate. See “Step 1: Perform Administrative and Security Tasks” on page 2-6 for a list of possible authorization requirements for MAINVIEW SRM.

Note: Attention all CA-ACF2 users: see *Implementing Security for MAINVIEW Products* for information about configuring your ESM for enhanced security. You must run at least steps 1, 2, and 3.

Product Authorization

All MAINVIEW SRM products require password authorization. You should have received an e-mail message from BMC Software that provided your product passwords. If you did not receive your passwords, see the *OS/390 and z/OS Installer Guide* for information about requesting passwords.

Installation Considerations

Consider the following issues before you begin to install MAINVIEW SRM version 7.2.

Migrating from Earlier Versions

For information about migrating from an earlier version of MAINVIEW SRM, see Appendix A, “Migrating from Earlier Versions.”

Running with Other System Software

With the exception of Softworks PSP version 115, MAINVIEW SRM must be the last product that you start and the first that you stop. In all cases, you must stop products in the reverse order of start; that is, if you started product A first, and then MAINVIEW SRM, then you must stop MAINVIEW SRM first, and then product A.

PSP versions 115 and earlier must be started after MAINVIEW SRM. The following zaps from Softworks corrects this problem, and the problems were corrected in PSP version 116:

- SWAG011.200
- SWAG012.200

If you have applied these zaps or if you are using PSP 116 or later, you can start MAINVIEW SRM after you initialize PSP.

Note: Only one instance of SVOS can be active on a system at a time; therefore, MAINVIEW SRM cannot operate concurrently with earlier versions of the SVOS started task.

Contact BMC Software Customer Support for the most current information about compatibility with other system management products.

Chapter 2 **MAINVIEW SRM AutoCustomization**

This chapter describes the tasks necessary to customize MAINVIEW SRM. The following topics are discussed:

Overview	2-2
Customization Steps	2-5
Step 1: Perform Administrative and Security Tasks.	2-6
Step 2: Copy Installation Parm Library to Your Library	2-10
Step 3: Enter Site Size and MAINVIEW SRM Passwords	2-11
Step 4: Build Work Files	2-12
Step 5: Update MAINVIEW SRM Global Parameters	2-14
Step 6: Build Application Collector Database	2-17
Step 7: Build Performance Collector Database	2-17
Step 8: Build Space Collector Database.	2-18
Step 9: Link Distributed Systems Collection Agent (optional)	2-19
Step 10: Create Started Task Procedures	2-20

Overview

AutoCustomization is an interactive ISPF dialog that is provided to help you customize BMC Software products, as follows:

- it propagates information for shared customization steps
- it enables you to browse steps before you perform them
- it identifies the steps that you have completed
- it reduces the likelihood of errors

When you start the AutoCustomization procedure for MAINVIEW products, the first panel lists the products that are available for customization.

Warning! If you have not already customized MAINVIEW Infrastructure, you must do so *before* you customize MAINVIEW SRM. For information about customizing MAINVIEW Infrastructure (MVI), see the *MAINVIEW Common Customization Guide*.

If you purchased the Automation component (formerly Enterprise Storage Automation), be sure to install and customize MAINVIEW AutoOPERATOR before you customize MAINVIEW SRM.

BMC Software recommends that you retain the installation and customization libraries in case you want to add or reconfigure MAINVIEW SRM components later. You can restart AutoCustomization at any time by entering the following on the command line:

```
TSO EX '&prefix.BBCLIB(BBCUST)'
```

When you select MAINVIEW SRM, a panel is displayed on which you select MAINVIEW SRM products to customize (see Figure 2-1 on page 2-3). The panel displays multiple customization selections.

Figure 2-1 MAINVIEW SRM Component-Selection Panel

```

MVS RM ----- MAINVIEW SRM ----- CUSTOMIZATION
COMMAND ==>                                SCROLL ==> PAGE

Select either All MAINVIEW SRM Components or only the component(s) you wish to
customize. Then press Enter to display a list of the steps to customize the
component(s) you have selected.

* All MAINVIEW SRM Components          ==> S (S or leave blank)

* Allocation
  .EasyPOOL, EasySMS, and StopX37/II  ==> (S or leave blank)
  -or-
  .StopX37/II only                    ==> (S or leave blank)

Automation                            ==> (S or leave blank)

Reporting                              ==> (S or leave blank)
  .Application, HSM, performance, and space collectors

Press ENTER to continue, END to exit, or HELP for help.

```

On the panel, select each of the MAINVIEW SRM components that you want to customize, as follows:

- **All MAINVIEW SRM Components**

This option enables you to customize *all* MAINVIEW SRM components in integrated steps. If you did not order the entire suite of MAINVIEW SRM products, choose the component or combination of components that you purchased and want to customize from the other options.

- **Allocation**

Choose this option to customize either of the following

- the Allocation component of MAINVIEW SRM, which includes StopX37/II, EasyPOOL, and EasySMS
- only the StopX37/II subcomponent, which includes the MAINVIEW interface but does not include any other subcomponents of MAINVIEW SRM

- **Automation**

Choose this option to customize the MAINVIEW SRM Automation component (formerly Enterprise Storage Automation).

- **Reporting**

Choose this option to customize the MAINVIEW SRM Reporting component, which includes the following collectors:

- application collector (formerly SG-Control)
- HSM collector (formerly EasyHSM)
- performance collector (formerly StorageGUARD)
- space collector (formerly StorageGUARD)

Warning! AutoCustomization does not support SG-Auto. You must add your current SG-Auto password and any other variables used by SG-Auto to SMMSYSxx after completing AutoCustomization. You can continue to use your existing started task JCL, but you may need to update the name of the BMC Software link library specified in the STEPLIB DD name if it has changed.

MAINVIEW SRM customization provides the command options described in Table 2-1.

Table 2-1 MAINVIEW SRM Customization Command Options

Command	Description
CANCEL	exits without saving data
END	exits without saving data
ENTER	accepts the values in the panel and continues
PRT	generates the JCL to print a copy of the administration checklist for the systems programmers or security administrators
RESET	resets all fields in the panel to installation default values
SAVE	saves all current field values in the permanent table

Customization Steps

Table 2-2 provides a list of the customization steps and references page numbers that provide instructions for each step. Use Table 2-2 and the instructions in this section as a reference when you use AutoCustomization. The customization step examples that are in this section assume that you are customizing all MAINVIEW SRM components.

The product combination at your site determines the steps that you must use and the fields that you see on the panels. In Table 2-2, an “o” in a column indicates that the step is optional.

Table 2-2 Customization Steps

Customization Steps	MAINVIEW SRM Product Group			
	Common	Allocation	Automation	Reporting
“Step 1: Perform Administrative and Security Tasks” on page 2-6	x			
“Step 2: Copy Installation Parm Library to Your Library” on page 2-10	x			
“Step 3: Enter Site Size and MAINVIEW SRM Passwords” on page 2-11	x			
“Step 4: Build Work Files” on page 2-12	x			
“Step 5: Update MAINVIEW SRM Global Parameters” on page 2-14	x			
“Step 6: Build Application Collector Database” on page 2-17				x
“Step 7: Build Performance Collector Database” on page 2-17				x
“Step 8: Build Space Collector Database” on page 2-18				x
“Step 9: Link Distributed Systems Collection Agent (optional)” on page 2-19				o
“Step 10: Create Started Task Procedures” on page 2-20	x			

Step 1: Perform Administrative and Security Tasks

Before MAINVIEW SRM can be started, the tasks listed in Table 2-3 *must* be performed by your systems programmer or security administrator on each system that will run MAINVIEW SRM. Any items marked with an asterisk are required by at least one of the steps in AutoCustomization and *must* be completed *before* you perform that step.

Table 2-3 provides a checklist of tasks that you must perform before MAINVIEW SRM is operational. Mark each task with an X as you complete it. Any items marked with an asterisk (*) must be completed before you continue with the next step. Task explanations follow the checklist.

Note: The checklist shows all administrative and security tasks. However, your panel displays only those tasks that are needed by the components you have selected.

Tip: To generate JCL to print the checklist, enter PRT on the command line.

Table 2-3 Administrative and Security Tasks Checklist

Completed	Task	Explanation
	* APF-Authorize the BMC Software Link Library	page 2-7
	*TSO-Authorize the BUDGET and BUDDSN Commands	page 2-7
	Activate SMF Exits IEFU83 and IEFU84 in SMFPRMxx	page 2-7
	Add START SVOS command to COMMNDxx	page 2-7
	Authorize Started Task Procedure SGDCOLLS	page 2-8
	Authorize Started Task Procedure SGPPROC	page 2-8
	Authorize Started Task Procedure SVOS	page 2-8
	Authorize Started Task Procedure SVWTCPIP	page 2-8
	Enable the DFHSM ARCxxxx Exits for the HSM Collector	page 2-8
	Give Started Task Procedure SGDCOLLS High Dispatching Priority	page 2-9
	Give Started Task Procedure SGPPROC High Dispatching Priority	page 2-9
	Give Started Task Procedure SVOS High Dispatching Priority	page 2-9
	Give Started Task Procedure SVWTCPIP High Dispatching Priority	page 2-9
	Select the MAINVIEW SRM SMF User Record	page 2-9
	Select SMF Record Types 30 and 42	page 2-9
	Set up pre-defined solutions in AutoOPERATOR	page 2-9
	TSO-Authorize BBSDTCPA as a TSO Service Facility	page 2-9
	Verify that MAINVIEW Infrastructure (MVI) has been installed	page 2-10

APF-Authorize the BMC Software Link Library

Add the BMC Software link library to your APF PROG $_{xx}$ parmlib member in SYS1.PARMLIB. The link library is necessary to run the MAINVIEW SRM started task. If you are building an application database, this step *must* be performed *before* continuing AutoCustomization.

```
APF FORMAT ( DYNAMIC )
APF ADD
      DSNAME( &prefix..BBLINK)           VOLUME( xxxxxxx )
```

Then issue the following command:

```
T PROG= $_{xx}$ 
```

If you cannot perform a dynamic update of the APF list, you must schedule an IPL before you can implement MAINVIEW SRM.

TSO-Authorize the BUDGET and BUDDSN Commands

If you customizing the Reporting component, you must add the BUDGET and BUDDSN commands, which are used by the application collector, to the AUTHCMD section in your IKJTSO $_{xx}$ member in SYS1.PARMLIB. The BUDGET command is also used to initialize the application database during AutoCustomization.

```
AUTHCMD NAMES(                               /* AUTHORIZED COMMANDS */ +
      BUDDSN                                   /* BMC SOFTWARE, INC */ +
      BUDGET                                   /* BMC SOFTWARE, INC */
```

Activate SMF Exits IEFU83 and IEFU84 in SMFPRM $_{xx}$

If you have installed the performance collector, make sure that SMF exits IEFU83 and IEFU84 are active in your SMFPRM $_{xx}$ member in SYS1.PARMLIB. The performance collector dynamically replaces these exits when it starts so that it can retrieve accounting and DFSMS information. For example:

```
SYS( EXITS( IEFU83 , IEFU84 ) , INTERVAL( SMF , SYNC ) , NODETAIL
```

Add START SVOS command to COMMND $_{xx}$

To automatically start MAINVIEW SRM at system initialization, add the following line to your COMMND $_{xx}$ member in SYS1.PARMLIB:

```
COM= ' S SVOS '
```

Authorize Started Task Procedures

- Make sure that **SVOS** has authority to run as a started task. It must have authority to perform alter/update actions, such as **COMPRESS**, against any data set requested by a user from within a **MAINVIEW SRM** view. This is because some requests are sent to the **SVOS ASID** to be executed.

Note: **MAINVIEW SRM** sends the request to **SVOS** only after verifying that the user has authority to perform the action. See *Implementing Security for MAINVIEW SRM Products* for further details.

- If you have installed the space collector, make sure that **SGDCOLLS** has authority to run as a started task. See *Implementing Security for MAINVIEW SRM Products* for further details.
- If you have installed the performance collector, make sure that **SGPPROC** has authority to run as a started task. See *Implementing Security for MAINVIEW SRM Products* for further details.
- If you intend to connect to distributed services, make sure that **SVWTCPIP** has authority to run as a started task. Assign it a user ID and password so that **PATROL** can log on to **MAINVIEW SRM** through the **PATROL Console**. See *Implementing Security for MAINVIEW SRM Products* for further details.

Enable the DFHSM ARCxXXXX Exits for the HSM Collector

If you have installed the HSM collector and you wish to use the **MAINVIEW SRM HSMBACKP**, **HSMGCCNV**, **HSMGIGRT**, or **HSMRECAL** functions, you must make the **MAINVIEW SRM** user exits available to **DFHSM**. You can either concatenate the BMC Software link library in the **DFHSM** started task procedure or add the exits to your **ARCCMDxx** member in **SYS1.PARMLIB**. Enable the exits with the following **SETSYS** command:

```
SETSYS EXITON(ARCMDEXT , ARCRDEXT , ARCSAEXT)
```

Set Dispatching Priority

For the functions you have installed, you should set a high dispatching priority for the associated started tasks listed below. If you are running in Goal Mode, it should run in service class SYSSTC.

- SVOS
- space collector, SGDCOLLS
- performance collector, SGPPROC
- Patrol Storage Manager, SVWTCPIP

Select the MAINVIEW SRM SMF User Record

Make sure that the SMF record that EasyPOOL, EasySMS, StopX37/II, and the HSM collector generate is either selected by the TYPE option or *not suppressed* by the NOTYPE option in the SMFPRM_{xx} member in SYS1.PARMLIB. The MAINVIEW SRM user record type is set by the SMFID global parameter. The default is 201.

Select SMF Record Types 30 and 42

Make sure that SMF records 30 and 42 are either selected by the TYPE option or *not suppressed* by the NOTYPE option in the SMFPRM_{xx} member in SYS1.PARMLIB.

If you do not want to write SMF type 42 records, set the SGP_SMF42 global parameter in MAINVIEW SRM to NO (default).

Set up pre-defined solutions in AutoOPERATOR

MAINVIEW SRM Automation uses services provided by MAINVIEW AutoOPERATOR. Copy the pre-defined members from the MAINVIEW SRM sample library to a data set in the BBIPARM concatenation of the AutoOPERATOR BBISS started task.

See the *MAINVIEW SRM Customization Guide* for further details on customization tasks for MAINVIEW SRM Automation users.

TSO-Authorize BBSDTCPA as a TSO Service Facility

If you intend to use distributed systems agents, you must add BBSDTCPA to your IKJTSO_{xx} member in SYS1.PARMLIB as follows:

```
AUTHTSF NAMES( /* AUTHORIZED TSO Service Facility */ +
               BBSDTCPA /* BMC SOFTWARE, INC */
```

Verify that MAINVIEW Infrastructure (MVI) has been installed

Verify that MAINVIEW Infrastructure has been installed and customized. MAINVIEW SRM uses services provided by MAINVIEW Infrastructure.

Step 2: Copy Installation Parm Library to Your Library

You must copy the sample members from the MAINVIEW SRM installation library (BBPARM) to your user library (UBBPARM). Provide prefixes as follows:

From *?prefix*.BBPARM

To *?prefix*.UBBPARM

Note: AutoCustomization will update the SMMSYS.xx member in your parameter library when you customize the MAINVIEW SRM global parameters in a later step.

In the **Replace?** field, specify YES only if your UBBPARM parm library already contains members and you want to replace them with the members in the installation parm library. Otherwise, specify NO.

Press **Enter** to complete the copy process.

Step 3: Enter Site Size and MAINVIEW SRM Passwords

This task asks you to indicate the size of your installation by entering the approximate amount of storage MAINVIEW SRM will manage, and to enter the passwords you were given by BMC Software.

Estimated Terabytes of Storage to Manage

In the **Estimated number of terabytes of storage to manage** field, specify the approximate number of terabytes of DASD that MAINVIEW SRM will manage (maximum 6 digits).

Note: If you use mirrored volumes, do *not* include these in the count.

The value that you enter here is used in later steps to set the recommended sizes for the log file and the collector databases. You will have the opportunity to change these values before allocating them.

Passwords

Enter the 16-character password from BMC Software for your component or package. Use the **PASSWORD** keyword to add this password to the **SMMSYSxx** global parameter member. Each password is date-stamped and identified by product name to facilitate future password updates.

If you have not been issued a new password, continue to use your current, valid password as follows:

- For the **Allocation** component, use a password that was issued for EasyPOOL, EasySMS, or StopX37/II.
- For the **Automation** component, use the password that was issued for Enterprise Storage Automation.
- For the **Reporting** component, use a password that was issued for SG-Control, StorageGUARD, or EasyHSM.
- If you selected the **StopX37/II only** component (without the Allocation component), use the password that was issued for StopX37/II.

Leave other fields blank, and press **Enter** to save the password and site size values.

Warning! When migrating from a single product to a component grouping using a password for the single product, all products that comprise the component will be set to active. For example, if you were using EasyPOOL and installed the Allocation component using the EasyPOOL password, the EasyPOOL password would also activate EasySMS and StopX37/II functions. If you do not want to use a specific product, you need to deactivate the product or products using the **START_XXXX=N** global parameters (see the *MAINVIEW SRM Reference Summary* for a description of these parameters).

Tip: Use the following chart to record your component passwords.

Password	Value
Password for Allocation	
Password for Automation	
Password for Reporting	
Password for StopX37/II only	

Step 4: Build Work Files

The panel for this step provides a list of fields that are required to build work files for your selected components. Perform the following tasks:

Step 1 Modify the work file fields that are described in Table 2-4, and then press **Enter** to display JCL that allocates the work files.

Note: If you specify no log files or RVA work files, the step will be marked complete without displaying any JCL.

Step 2 Check the job return code before you continue, and then type one of these commands on the command line:

- SUBMIT to submit the job
- END to save the member and continue without submitting the job
- CANCEL to return to the previous panel without saving the member

Step 3 Save the JCL in the *?prefix.UBBSAMP* library.

Table 2-4 Work File Fields (Part 1 of 2)

Field	Default Value	Description
Log data set count	3	The number of log data sets to be allocated to the SVOS command procedure (PROC). The log data sets are generated automatically when the SVOS started task procedure is built in a later step. Any existing log files of the same name are <i>not</i> replaced. The default is between 3 and 4. The log data sets are allocated as: <i>&prefix.ACTLOGnn</i>
Log data set size in megabytes	15	The number of megabytes to use to allocate each log data set. When a log data set is full, MAINVIEW SRM automatically rolls to the next log data set. The default value depends on your site size and is between 10MB (approximately 12 cylinders on a 3390 device) and 15MB. Note: Member LOGCALC of <i>?prefix.UBBSAMP</i> contains a calculator to help you determine the optimum size of your log data sets. The calculation is based on an average log record size of 280 bytes over 30 days (1,200 records per day).
Log data set volume		The name of the volume on which you want to allocate log files. You can leave this field blank if SMS will allocate a volume.
RVA IXFP ^a or SVAA supported?	no	If you specify YES, AutoCustomization builds the work files that the performance and space collectors use. If you specify NO, the SG_SIBSTK and SGP_SIBSTK global variables in your SMMSYSxx member will be removed when the member is updated.
<p>^a Iceberg eXtended Facilities Product (IXFP) and Shared Virtual Array Administrator (SVAA) are reporting products for RVA devices that are distributed by StorageTek. The last version of IXFP was 2.1, and IXFP was renamed to SVAA as of version 3.0. MAINVIEW SRM works with either version or name.</p>		

Table 2-4 Work File Fields (Part 2 of 2)

Field	Default Value	Description
RVA IXFP ^a or SVAA work file prefix	? <i>prefix</i>	The Reporting component uses these work files to contain message output that is associated with a request, similarly to sysout or sysprint type outputs. The RVA IXFP work files are allocated as, and existing files of the same name are <i>not</i> replaced. <i>&prefix</i> .IXFPSGD.SIBLMSG <i>&prefix</i> .IXFPSGD.SIBRMSG <i>&prefix</i> .IXFPSGD.SIBSYSIN <i>&prefix</i> .IXFPSGP.SIBLMSG <i>&prefix</i> .IXFPSGP.SIBRMSG <i>&prefix</i> .IXFPSGP.SIBSYSIN <i>&prefix</i> .IXFPSGP.SMFALTLG <i>&prefix</i> .IXFPSGP.SMFOUTLG
RVA IXFP ^a or SVAA work file unit	SYSALLD A	The name of the unit that describes the work file volume, for example SYSDA or 3390.
RVA IXFP ^a or SVAA work file volume	n/a	The name of the volume on which you want to allocate log files and RVA work data sets. You can leave this field blank if SMS will allocate a volume.
RVA IXFP ^a or SVAA SIBPARMS library prefix	SYS1	The SIBPARMS library is a PDS that contains customizable parameters for the IXFP or SVAA subsystem. This is the prefix of the RVA IXFP or SVAA parm library (<i>&prefix</i> .SIBPARMS). It is used in a later step to build the performance collector started task PROC (SGPPROC) and the space collector started task PROC (SGDCOLLS).
<p>^a Iceberg eXtended Facilities Product (IXFP) and Shared Virtual Array Administrator (SVAA) are reporting products for RVA devices that are distributed by StorageTek. The last version of IXFP was 2.1, and IXFP was renamed to SVAA as of version 3.0. MAINVIEW SRM works with either version or name.</p>		

Step 5: Update MAINVIEW SRM Global Parameters

The panel for this step displays the global parameters that are required for the products you chose to customize. Table 2-5 describes these parameters. Modify the fields or accept the defaults and press **Enter** to update your SMMSYS_{xx} member. For more information about the SMMSYS_{xx} member global parameters, see the *MAINVIEW SRM User Guide and Reference*.

Note: Each field is described in the online Help. Press **F1** for Help; press **F11** to scroll right and **F10** to scroll left.

SMMSYS_{xx} suffix: 00 Parmlib: ?*prefix*.IMAG_{sysid}.UBBPARM
SMMSYS_{xx} backup: 99 Replace: NO

Table 2-5 Required MAINVIEW SRM Global Parameters (Part 1 of 2)

Parameter	Default Value	Description
AOO_SUBSYS	SSA1	the 4-character name of the AutoOPERATOR subsystem that will receive and send jobs on behalf of MAINVIEW SRM
BBI3_SSID	BBCS	the 4-character name of the CAS subsystem to which the SVOS PAS should connect The CAS should be active before starting SVOS.
FUNC	00	the 2-character suffix of the SMFUNCxx function definition member, which is required by all components of MAINVIEW SRM
HLOGAUTH	01	the automatic DFHSM log switch interval in hours
HLOGAUTM	00	the automatic DFHSM log switch interval in minutes
HLOGCOLL	YES	Activate HSM Collector logfile collection?
HLOGINDX	? <i>prefix</i>	the prefix of the HSM Collector data set that will contain the records extracted from the DFHSM logfile It can contain up to 20 characters. The full name will be <i>prefix.Dyyymmdd.Thhmmss.SYSsystem-id</i> .
HLOGPRIM	90	the number of tracks used for the primary allocation of the HSM log extract file The secondary allocation will be half the size of the primary allocation. The valid range is 1-999.
HLOGUNIT	SYSALLDA	the name of the unit on which to allocate the log extract file
HSMACTID	HSMACT	the high-level qualifier of the DFHSM activity data sets
PERFRM_PRC	SGPPROC	the name of the cataloged procedure used to start the performance collector
POOL	00	the 2-character suffix of the SMPOOLxx pool definition member
SG_INITPOOL	2000	the maximum number of defined pools included in a single snapshot The valid range is 10-999999. The default is between 1000 and 2000 depending on the size of the site.
SG_INITVOL	5000	the maximum number of defined volumes included in a single snapshot The valid range is 10-999999. The default is between 3000 and 35000 depending on the size of the site.
SG_MAXPOOL	1	the number of pools that can be defined to a volume The valid range is 1-8
SG_READNTVL	30	specifies the frequency with which a snapshot is created in core The valid range is 5-9999. The default is 30 minutes.
SG_SIBSTK		the IXFP batch parameter is needed only if you wish to collect RVA data NOTE: If you do not support RVA IXFP or SVAA, this variable will be deleted.

Table 2-5 Required MAINVIEW SRM Global Parameters (Part 2 of 2)

Parameter	Default Value	Description
SG_SUBTASKS	3	specifies the number of volumes that can be read in parallel The valid range is 2-10.
SG_WRITNTVL	30	specifies the frequency with which snapshots are written to the database. The valid range is 1-1439. The default is 30 minutes. It should be the same, as, or a multiple of, SG_READNTVL.
SGCDSN	? <i>prefix</i> .SPACEDB	specifies the name of the application collector database that will be built in the next step
SGD_PROCNM	SGDCOLLS	the name of the cataloged procedure to start the space collector
SGDCOLLECT	NO	specifies whether the space collector will collect pool data It can be overridden at the pool level.
SGP_SIBSTK		the IXFP batch parameter, which is needed only if you wish to collect RVA data NOTE: If you do not support RVA IXFP or SVAA, this variable will be deleted.
SGP_SMF42	NO	Write the SMF 42 record to the SMF data set?
SMFID	201	the SMF record ID for MAINVIEW SRM NOTE: This SMF type must be allowed by your SMFPRMxx member in SYS1.PARMLIB. If you do not wish to write SMF records, set SMFID to 0, or remove the SMFID global variable from SMMSYSxx.
SYSLIB	SYS1.LPALIB	specify the LPA library used when you last performed an IPL NOTE: If you use more than one LPA library, you can add them to the SMMSYSxx member using keywords SYSLIB2 and SYSLIB3. Any SYSLIB DD in the SVOS started task procedure will override the SYSLIB value in the SMMSYSxx member.

Step 6: Build Application Collector Database

The panel for this step displays the fields that are required to build the application collector database. Modify the fields or accept the defaults and press **Enter** to update your SMMSYSxx member.

Note: Each field is described in the online Help. Press **F1** for Help; press **F11** to scroll right and **F10** to scroll left.

Application collector database: *?prefix.SPACEDB*.

Table 2-6 Application Collector Database Specifications

Field	Default Value
Allocate database on this volume	n/a
Default maximum KB for permanent data sets	100000
Default maximum KB for temporary data sets	100000
Default maximum KB for VSAM data sets	100000
Estimated number of applications to manage	500
Member name in which to save allocation JCL	BLDAPPDB
Replace existing database?	NO

Step 7: Build Performance Collector Database

The panel for this step displays the fields that are required to build the performance collector database. Modify the fields or accept the defaults and press **Enter** to display the JCL to build the database. Check the job return code before you continue.

Note: Each field is described in the online Help. Press **F1** for Help; press **F11** to scroll right and **F10** to scroll left.

Tip: A calculator for the performance collector database is in the CALCPERF member of the *?prefix.UBBSAMP*.

- Performance collector database: *?prefix.SGPRDF*
- Performance collector index: *?prefix.SGPRDIF*

Table 2-7 Performance Collector Database Specifications

Field	Default Value
Allocate database on this volume	n/a
Days to keep online	8
Estimated active cache CUs per interval	10
Estimated active data sets per interval	1000
Estimated active jobs per interval	1000
Estimated active phys volumes per interval	100
Estimated active pools per interval	100
Estimated active storage classes per interval	100
Estimated active volumes per interval	100
Estimated active CHPIDs per interval	100
Estimated active LCUs per interval	20
Member name in which to save allocation JCL	BLDPRFDB
Number of database files to allocate	3
Number of SMF intervals per day	96
Replace existing database?	NO

Step 8: Build Space Collector Database

The panel for this step displays the fields that are required to build the space collector database. Modify the fields or accept the defaults and press **Enter** to display the JCL to build the database. Check the job return code before you continue.

Note: Each field is described in the online Help. Press **F1** for Help; press **F11** to scroll right and **F10** to scroll left.

Tip: A calculator for the space collector database is in the CALCSPAC member of the *?prefix*.UBBSAMP.

- Space collector APPLICATION file: *?prefix*.SGRDACNT
- Space collector POOL file: *?prefix*.SGRDPOOL
- Space collector RESERVED file: *?prefix*.SGRDRSVD
- Space collector VOLUME file: *?prefix*.SGRDVOL

Table 2-8 Space Collector Database Specifications

Field	Default Value
Allocate APPLICATION file on this volume	n/a
Allocate POOL file on this volume	n/a
Allocate RESERVED file on this volume	n/a
Allocate VOLUME file on this volume	n/a
Days of data to keep	100
Estimated number of applications to manage	500
Estimated number of pools to manage	100
Estimated number of volumes to manage	1000
Estimated number of RAID physical volumes	100
Member name in which to save allocation JCL	BLDSPCDB
Replace existing database?	NO
Use the application collector database?	YES

Step 9: Link Distributed Systems Collection Agent (optional)

The panel for this step displays the fields that are required for the Distributed Systems Agent. Modify the fields or accept the defaults and press **Enter** to display the JCL that links the SAS/C modules. Check the job return code before you continue.

Table 2-9 Distributed Systems Agent Specifications

Field	Default Value
BMC Software Inc Clist library	? <i>prefix</i> .BBCLIB
CSSLIB data set name	SYS1.CSSLIB
Save link-edit JCL member as	LINKSAS
TCP/IP control data set	SYS1.IBMTCP.PRD.CNTL(TCPIP)
TCP/IP port number	5145

Step 10: Create Started Task Procedures

The panel for this step provides the information that is necessary to build the started task procedures for the products you are customizing. Press **Enter** to build the started task procedures.

Proclib: *?prefix*.UBBSAMP

SVOS command character: / (or NONE)

Distributed Systems Collector			
Member:	SVWTCPIP	Create:	YES
		Replace:	NO
HSM Collector			
Member:	HLOGTASK	Create:	YES
		Replace:	NO
MAINVIEW SRM SVOS			
Member:	SVOS	Create:	YES
		Replace:	NO
performance collector			
Member:	SGPPROC	Create:	YES
		Replace:	NO
space collector			
Member:	SGDCOLLS	Create:	YES
		Replace:	NO

Chapter 3 Customization Tasks for MAINVIEW SRM Reporting Users

Follow the instructions in this chapter only if you are licensed for the MAINVIEW SRM Reporting component. The following tasks are described in this chapter:

Task 1: Read the Critical Notes	3-1
Task 2: Customize JCL for HSM Log Collection.	3-1
Task 3: Customize Execution JCL for Output Management	3-2

Task 1: Read the Critical Notes

A number of DFHSM views are based on data in the DFHSM log files. This data is extracted by MAINVIEW SRM from the log files and written to a MAINVIEW SRM data set. You can run the log-extraction program as part of MAINVIEW SRM, or you can run it in batch mode. For IVP purposes, AutoCustomization sets the facility up to run as part of MAINVIEW SRM.

Task 2: Customize JCL for HSM Log Collection

Modify values for HSM log extraction parameters using the following instructions. You will need to establish automated procedures to cause submission of this batch job when HSM log files are switched. See the *MAINVIEW SRM Reporting Reference Manual* for more information on the HSM Collector.

Tip: For migrating customers, these parameters have not been modified in this version.

Step 1 Copy *?prefix.BBSAMP(JCLHXMLX)* to *?prefix.UBBSAMP(JCLHXMLX)*.

Step 2 Follow the user instructions in *?prefix.UBBSAMP(JCLHXMLX)*.

```
//STEP10 EXEC PGM=SMMANP01 , PARM= 'NOSWAP ,NOAUTO '  
//STEPLIB DD DISP=SHR , DSN=?BBLINK  
//*HLOGXXXX DD DISP=SHR , DSN=DFHSM . Y . LOGFILE . XXXX
```

Step 3 Save the modified member.

Task 3: Customize Execution JCL for Output Management

Modify values for output management using the following instructions.

Tip: For migrating customers, these parameters have not been modified in this version.

Step 1 Copy *?prefix.BBSAMP(JCLOPM)* to *?prefix.UBBSAMP(JCLOPM)*.

Step 2 Modify the JCL for your installation.

```
//STEP10 EXEC PGM=OPRTR000 , REGION=2M  
//STEPLIB DD DSN=?$BBLINK , DISP=SHR <== MAINVIEW SRM LOADLIB  
//SYSPRINT DD SYSOUT=*  
//SYSUT1 DD UNIT=SYSALLDA , SPACE=(CYL , (10 , 10))  
//SYSUT2 DD UNIT=SYSALLDA , SPACE=(CYL , (10 , 10))  
//OPMIN DD DSN=DFDSS . INPUT . FILE , DISP=SHR <== DFDSS MESSAGES  
//OPMSKL DD DSN=?$OPMSKEL , DISP=SHR <== OPM SKELETONS  
//OPMSUB DD DSN=?$OPMCARDS , <== OPM GENNED CARDS  
// DISP=(NEW , CATLG) , UNIT=SYSALLDA ,  
// SPACE=(TRK , (5 , 1))  
//INTRDR DD SYSOUT=(A , INTRDR) , DCB=BLKSIZE=80  
//SYSIN DD *  
/*
```

Step 3 Save the modified member.

MAINVIEW SRM must be active to run output management.

For complete instructions for using the HSM collector and other MAINVIEW SRM Reporting component features, see the *MAINVIEW SRM Reporting Reference Manual*.

Chapter 4 Customization Tasks for PATROL Storage Manager Users

Follow the instructions in this chapter only if you are licensed for PATROL Storage Manager and MAINVIEW SRM. The following tasks are described in this chapter:

Task 1: Read the Critical Notes	4-2
Task 2: Install the PATROL Client Software	4-2
Task 3: Customize Distributed Systems Collection Agent Started Task .	4-2
Task 4: Modify the Link-Edit JCL for TCP/IP	4-3
Task 5: Start the TCP/IP Transaction Scheduler	4-3

Task 1: Read the Critical Notes

The PATROL Storage Manager central server uses IBM TCP/IP version 3.1 or later to communicate with MAINVIEW.

You must have PATROL Storage Manager installed on the central server *before* you install the MAINVIEW SRM client component because you define important configuration parameters for the client software during server software installation.

The TCP/IP server component started task (SVWTCPIP) must be assigned security authority equal to the sum of authority for all MAINVIEW SRM users. When a user connects to the server, the user logon ID and password are used to build a secured environment that restricts the user to authorized activities.

Note: Under no circumstances does a user have more authority using PATROL than with the MAINVIEW SRM interface.

Task 2: Install the PATROL Client Software

See the *PATROL Storage Manager Getting Started Guide* for information about installing central server software.

Task 3: Customize Distributed Systems Collection Agent Started Task

Follow these steps to modify the PATROL Storage Manager started task JCL for TCP/IP.

- Step 1** Copy *?prefix.BBSAMP(SVWTCPIP)* to *?prefix.UBBSAMP(SVWTCPIP)*.
- Step 2** Follow the user instructions in *?prefix.UBBSAMP(SVWTCPIP)*.
- Step 3** Save the modified member and copy it to a procedure library.

Task 4: Modify the Link-Edit JCL for TCP/IP

Follow these steps to modify the link-edit JCL.

- Step 1** Copy *?prefix.BBILIB(SVWSASL1)* to *?prefix.UBBSAMP(SVWSASL1)*.
- Step 2** Follow the user instructions in *?prefix.UBBSAMP(SVWSASL1)* to modify the link-edit JCL.
- Step 3** Save and submit the modified member.

Task 5: Start the TCP/IP Transaction Scheduler

Follow these steps to start the TCP/IP transaction scheduler.

- Step 1** Start the TCP/IP communication software.
- Step 2** Start SVWTCPIP.
- Step 3** Watch for the following activation messages to appear at the mainframe host console:

```
GT001I - MAINVIEW SRM 7.2 TCP/IP Gateway  
BGT002I - Gateway initialization completed  
BGT003I - Gateway ready for client access
```

These messages indicate that the MAINVIEW SRM transaction scheduler successfully started.

Note: To stop the MAINVIEW SRM transaction scheduler, type the following command on a console command line:

```
C SVWTCPIP
```

Chapter 5 Customization Tasks for MAINVIEW SRM Automation Users

Follow the instructions in this chapter only if you are licensed for the MAINVIEW SRM Automation component. The following tasks are described in this chapter:

Task 1: Read the Critical Notes	5-2
Task 2: Install AutoOPERATOR	5-2
Task 3: Set Up Predefined Solutions in AutoOPERATOR.....	5-2

Note: If you are migrating from an earlier release of MAINVIEW SRM, see “Migrating from AutoOPERATOR” on page A-8.

Task 1: Read the Critical Notes

You must install AutoOPERATOR first.

BMC Software recommends that you start the AutoOPERATOR product *before* you start MAINVIEW SRM Automation.

Note: If the SVOS and AutoOPERATOR BBLINK libraries are not the same data set, the SVOS BBLINK library must be added to the AutoOPERATOR started task JCL for the load modules IMFUSRM1 and IMFUSRM2. These libraries might not reference the same data set, depending on the SMP environments used by the two products.

Task 2: Install AutoOPERATOR

To use MAINVIEW SRM Automation, MAINVIEW AutoOPERATOR 6.1 *or later* must be active on your system. If AutoOPERATOR is already installed on your system, it requires no new installation or customization steps.

If it is not already installed, install AutoOPERATOR by using the instructions in the following manuals (see the sections that pertain to AutoOPERATOR):

- *OS/390 and z/OS Installer Guide*
- *MAINVIEW Installation Requirements Guide*
- *MAINVIEW Common Customization Guide*
- *Implementing Security for MAINVIEW Products*

Task 3: Set Up Predefined Solutions in AutoOPERATOR

After AutoOPERATOR is installed, set up predefined MAINVIEW SRM Automation solutions in AutoOPERATOR by using the following instructions.

Tip: If you are migrating from an earlier version of AutoOPERATOR, note that many new Rules and Rule Sets have been added, and you should complete this task.

Step 1 Copy the following members from MAINVIEW SRM *?prefix*.BBSAMP to the AutoOPERATOR *?prefix*.UBBPARM. These members must be placed in a data set in the BBIPARM concatenation of the AutoOPERATOR BBISS started task.

- SRSVARA
- RULSRS
- RULSRS01
- RULSRS02
- RULSRS03
- RULSRS04
- RULSRS05
- RULSRS06
- SRSVARG
- SRSVARH
- SRSVARW
- SRSVARD
- SRSVARJ

Step 2 Copy the following members from MAINVIEW SRM *?prefix*.BBCLIB to the AutoOPERATOR *?prefix*.UBBPROC. You must place these members in the SYSPROC concatenation of the AutoOPERATOR BBISS started task.

- CORSR005
- CORSR010
- CORSR015
- CORSR020
- CORSR025

Step 3 Copy the following members from MAINVIEW SRM *?prefix*.BBSAMP to the AutoOPERATOR *?prefix*.UBBPROC. You must place these members in the SYSPROC concatenation of the AutoOPERATOR BBISS started task.

- ADSMHUNG
- ADSMWTOR
- HSMHELD
- HSMDUPR
- HSMRLSE
- HSMWAIT
- SRSVAR

Step 4 Issue the following AutoOPERATOR console command to execute the SRSVAR EXEC that initializes parameters for the predefined solutions:

```
F AOAS,%SRSVAR SRSVARG SRSVARH SRSVARW SRSVARD SRSVARA SRSVARJ
```

AOAS is the name of your AutoOPERATOR started task.

After you issue this command, SRSVAR runs automatically when AutoOPERATOR is started.

Alternatively, you can invoke an AutoOPERATOR EXEC from the COMMAND line of any AutoOPERATOR panel. For more information about invoking EXECs from AutoOPERATOR, see the *MAINVIEW AutoOPERATOR Basic Automation Guide*.

Chapter 6 Verification Tasks for All MAINVIEW SRM Users

Verify that you have successfully completed the installation of MAINVIEW SRM and that all licensed products are functional by performing the tests in this chapter. This chapter describes the following installation verification procedures (IVP):

Task 1: Start the SVOS Started Task	6-2
Task 2: Start the MAINVIEW Interface	6-2
Task 3: Access MAINVIEW SRM	6-3
Task 4: Define a Pool	6-3
Task 4a: Define a Pool Definition Using IVPPOOL	6-3
Task 4b: Test the Pool Definitions Using IVPPOOL	6-4
Task 5: Test the Allocation Component	6-4
Task 5a: Test EasyPOOL Using DASDPOOL	6-4
Task 5b: Test StopX37/II Using SPACPRIM	6-6
Task 6: Test the Reporting Component	6-7
Task 6a: Initiate a VTOC Scan	6-7
Task 6b: Test the Space Collector Databases	6-8
Task 6c: Test the Performance Collector Databases	6-9
Task 6d: Test the Application Collector Database	6-9
Task 6e: Test the CDS Query	6-10
Task 6f: Test the HSM Log Extraction	6-11
Task 7: Test the Automation Component	6-12
Task 7a: Test Event Generation	6-12
Task 7b: Test AUTO Functions	6-13
Where to Go from Here	6-15

The initial installation and customization of MAINVIEW SRM on a system requires that all collectors be initiated. At start-up, all internal collectors are automatically started and must complete a collection interval before some of the views are available. Each user must initiate the VTOC scan collector, which populates the data set views.

If you need assistance with any of these tasks, contact BMC Software Customer Support.

Note: There are no IVPs for EasySMS or PATROL Storage Manager.

Task 1: Start the SVOS Started Task

Before you start MAINVIEW SRM version 7.2, shut down earlier versions of any product in the MAINVIEW SRM suite. To start MAINVIEW SRM, issue the following command to start SVOS from a system console:

```
S SVOS
```

If SVOS fails to start, check the following:

- Are all data set names correctly spelled in the JCL?
- Is *?prefix.BBLINK* APF authorized?
- Is the SVOS JCL in a procedure library in the JESx procedure library concatenation?

If you have not started the MVI CAS, do so now.

Task 2: Start the MAINVIEW Interface

To start the MAINVIEW interface, issue the following command from the ISPF command shell:

```
TSO mainview
```

If the ISPF interface fails to start or if you receive error messages, check the following:

- Is *?prefix.BBLINK* APF authorized?
- Has *?prefix.BBLINK* been added to the LNKLST or the STEPLIB concatenation for the TSO logon PROC?

- Have all authorized programs and TSO commands been added to SYS1.PARMLIB(IKJTSo.xx)?

Task 3: Access MAINVIEW SRM

- Step 1** Select option **S** for **Storage Management** from the MAINVIEW Selection Menu. The Storage Management Solutions submenu is displayed.
- Step 2** Select option **1** for **MAINVIEW Storage Resource Manager** from the Storage Management Solutions submenu. The EZSRM Menu is displayed.

Task 4: Define a Pool

Use the following instructions to define a pool called IVPPOOL, which you will use to test EasyPOOL, performance collector, space collector, and StopX37/II.

Task 4a: Define a Pool Definition Using IVPPOOL

- Step 1** Copy *?prefix.BBSAMP(SMPOOLIV)* to *?prefix.UBBPARM(SMPOOLIV)*.
- Step 2** Follow the instructions in each member and save your changes.
- Step 3** Under Administration on the EZSRM Menu, select **Parmlib Members** to display the EZSRMP Parmlib Members menu.
- Step 4** Under SRM Parmlib Members on the EZSRMP Parmlib Members menu, select **Pools**.
- Step 5** Type **R** in the **CMD** column next to SMPOOLIV, then press **Enter** to refresh SMPOOLIV.

Note: Successfully refreshing SMPOOLIV makes it the active pool. It remains active until SVOS is stopped or until you refresh another pool member.

Task 4b: Test the Pool Definitions Using IVPPOOL

- Step 1** Sign on to MAINVIEW SRM. The EZSRM Menu is displayed.
- Step 2** Under DASD Analysis on the EZSRM Menu, select **Group & Pool Analysis** to advance to the Group & Pool Analysis menu.
- Step 3** Under Configuration on the Group & Pool Analysis menu, select **Group/Pool List**.
- Step 4** On the command line, type **L IVPPOOL** to locate IVPPOOL in the list.
- Step 5** Place your cursor on the number in the **Vols** column for IVPPOOL and press **Enter** to advance to the VOLCNFG view.
- Step 6** Verify that the volumes listed are the ones you defined for IVPPOOL in *?prefix*.UBBPARAM(SMPOOLIV). If you were unable to verify the volumes in the pool, check the following:
- Under Administration on the EZSRM Menu, select **Component Status**. Does the space collector display as active?
 - Under Administration on the EZSRM Menu, select **Parmlib Members**. to advance to EZSRMP. Under SRM Parmlib Members, select **All Active Members**. Does SMPOOLIV display as active?

Task 5: Test the Allocation Component

If you are not licensed for the Allocation component, skip this task. If you are licensed for the Allocation component, you must test the EasyPOOL functions and StopX37/II. There is no test for the EasySMS functions.

Task 5a: Test EasyPOOL Using DASDPOOL

- Step 1** Copy the following members from *?prefix*.BBSAMP to *?prefix*.UBBPARAM:
- SMFLSTDP
 - SMRLSTDP
 - IVPEZP01
- Step 2** Follow the instructions in each member and save your changes.
- Step 3** Sign on to MAINVIEW SRM. The EZSRM Menu is displayed.

- Step 4** Under Administration on the EZSRM Menu, select **Functions** to display the ADFUNC view. On ADFUNC, perform the following:
- 4.A** Type **C** in the **CMD** column next to DASDPOOL, then press **Tab**.
 - 4.B** Type **DP** in the **FLST** column, then press **Tab**.
 - 4.C** Type **DP** in the **RLST** column and press **Enter** to display the “change requested” message; press **Enter** again to display ADFUNC.
 - 4.D** Type **A** in the **CMD** column next to DASDPOOL, then press **Enter** to activate it.
- Note:** The suffix changes for DASDPOOL remain in effect until SVOS is stopped or until you change them to new values.

Step 5 From your ISPF session, submit job *?prefix.BBSAMP(IVPEZP01)*.

Step 6 Verify the following data set allocations:

- the data sets in IVPEZP01 that are associated with DD1 and DD2 have been allocated to the volumes that you defined for IVPPOOL in member SMPOOLIV
- the data set associated with DD3 has been allocated to the volume you specified in the JCL

If you were unable to verify the data set allocations, check the following:

- Under Administration on the EZSRM Menu, select **Parmlib Members** to advance to the EZSRMP Parmlib Members menu, then select **All Active Members** to display the ADMEMA view. Does SMPOOLIV display as active?
- Under Administration on the EZSRM Menu, select **Functions**. Does DASDPOOL display as active? Does DASDPOOL show DP as both FLST and RLST?
- Did the job saved as IVPEZP01 use the job name identified by the JOB= keyword in both SMFLSTDP and SMRLSTDP?
- Did the data sets associated with DD1, DD2 and DD3 match the filter criteria defined by DSN2 and DSN3 in SMRSLTDP?
- Under Administration on the EZSRM Menu, select **Component Status**. Does EasyPOOL display as active?

Task 5b: Test StopX37/II Using SPACPRIM

Step 1 Copy the following members from *?prefix.BBSAMP* to *?prefix.UBBPARM*:

- SMFLSTSP
- SMRLSTSP
- IVPX3701

Step 2 Follow the instructions in each member and save your changes.

Step 3 Sign on to MAINVIEW SRM. The EZSRM Menu is displayed.

Step 4 Under Administration on the EZSRM Menu, select **Functions**.

4.A Type **C** in the **CMD** column next to SPACPRIM, then press **Tab**.

4.B Type **SP** in the **FLST** column, then press **Tab**.

4.C Type **SP** in the **RLST** column and press **Enter** to display the “change requested” message; press **Enter** again to display ADFUNC.

4.D Type **A** in the **CMD** column next to SPACPRIM, then press **Enter** to activate it.

Note: The suffix changes for SPACPRIM remains in effect until SVOS is stopped or until you change them to new values.

Step 5 From your ISPF session, submit job *?prefix.BBSAMP(IVPX3701)*.

Step 6 Verify that the data set has been allocated with less primary space than specified in the JCL. Verify that the job message log contains a message stating that SPACPRIM has reduced the primary amount.

If you were unable to verify the data set allocation, check the following:

- Under Administration on the EZSRM Menu, select **Functions**.
 - Does SPACPRIM display as active?
 - Does SPACPRIM show SP as both FLST and RLST?
- Did the job you saved as IVPX3701 use the job name identified by the JOB= keyword in both SMFLSTSP and SMRLSTSP?
- Does the volume that you specified in IVPX3701 have less than 600 cylinders, but at least 120 cylinders (20 percent of 600 cylinders)? (If you do not have a volume that fits these criteria, change the primary space in job IVPX3701.)

- Under Administration on the EZSRM Menu, select **Component Status**. Does StopX37/II display as active?

Task 6: Test the Reporting Component

If you are not licensed for the Reporting component, skip this task. If you are licensed for the Reporting component, you must test the following functions:

- VTOC scan
- space collector
- performance collector
- application collector
- HSM collector CDS query and extract logs
- enterprise automation collector event generation

Task 6a: Initiate a VTOC Scan

To initiate a VTOC scan, type the following command, where *svosstc* is the name of your SVOS address space:

```
/F svosstc,SVOS VSCAN,SUF=IV
```

This command initiates a VTOC scan using the filter member SMVSCFIV (suffix IV). Filter member SMVSCFIV specifies to scan the IVPPOOL volumes and update the VTOC scan master collection data set.

The data set name that contains the scan output is indicated in a message that appears in the SVOS job log in response to this command.

Use these steps to verify the VTOC scan results:

- Step 1** Under DASD Analysis on the EZSRM Menu, select **Data Set Management** to advance to the Data Set Management menu.
- Step 2** Under Data Set Aging, select Age Distribution to access a pop-up menu.
- Step 3** Select **by HLQ** to advance to the DSSRAD view, which shows all high-level qualifiers for data sets on the volumes in the IVPPOOL. A summary of data set ages is given for each HLQ.

Step 4 Select a number in the Age 1 DSNs column to see the data sets that have the high-level qualifier in the first age range.

Note: Age-range values are specified in SMMSYS00 VSCAN_AGE x = keywords. If these keywords were not specified, then all data sets appear in AGE RANGE 1. If this is the case, consider taking the following steps:

- A. Add the VSCAN_AGE x = keywords to SMMSYS. For example,
VSCAN_AGER1=1
VSCAN_AGER2=7
VSCAN_AGER3=14

You can define up to nine ranges.

- B. Refresh the SMMSYS member.
- C. Reissue the VSCAN command.

Task 6b: Test the Space Collector Databases

Step 1 Under DASD Analysis on the EZSRM Menu, select **Space Utilization** to advance to the Space Utilization menu.

Note: A space collector interval must complete before the space collector data is available. The default interval is 60 minutes.

Step 2 Under DASD Utilization, select **Groups and Pools** to advance to the SPPOOL view. It shows pools and groups collected by the space collector, sorted in descending order by the Percent Full column.

Step 3 Select a pool or group to advance to the EZPOOL EZCmd menu.

Step 4 Under Volumes In Group, select **VIR Percent Full** to advance to the SPVOLVI view. It shows volumes in the selected group, sorted in descending order by the VTOC Index Percentage Full field.

If you are unable to verify the databases, wait for one interval to complete (as specified in the SG_WRITNTVL global parameter), then try again. The default interval is 60 minutes.

If you are still unable to verify the databases after waiting, type COMPSTAT as a primary command to see the Component Status view. Make sure that the space collector is active.

Task 6c: Test the Performance Collector Databases

Step 1 Under DASD Analysis on the EZSRM Main Menu, select **Performance** to advance to the Performance Menu.

Note: A performance collector interval must complete before the performance collector data is available. The performance collector interval is determined by the SMF Interval for the system.

Step 2 Under **Storage Performance**, select **Groups and Pools** to advance to the PRPOOL view. It shows the storage groups and pools collected by the performance collector, sorted in pool-name order.

Step 3 Select a pool to advance to the EZPOOL EZCmd menu.

Step 4 Under Volumes In Group, select **Worst Responding** to advance to the PRVOL view. It shows volumes in the selected storage group or pool, sorted in descending order by response time.

If you are unable to verify the databases, wait for one interval to complete (as specified in the SG_WRITNTVL global parameter), then try again. The interval is determined by the system's SMF collection interval.

If you are still unable to verify the databases after waiting, type COMPSTAT as a primary command to see the Component Status view. Make sure that the performance collector is active.

Task 6d: Test the Application Collector Database

Step 1 Copy the following members:

- *?prefix*.BBSAMP(SMFLSTSC) to *?prefix*.UBBPARM(SMFLSTSC) and follow the user instructions
- *?prefix*.BBSAMP(SMRLSTSC) to *?prefix*.UBBPARM(SMRLSTSC)
- *?prefix*.BBSAMP(IVPSGC01) to *?prefix*.UBBSAMP(IVPSGC01) and follow the user instructions

Step 2 Under Administration on the EZSRM Menu, select **Functions**.

2.A Type **C** in the **CMD** column next to SGCONTRL, then press **Tab**.

2.B Type **SC** in the **FLST** column, then press **Tab**.

2.C Type **SC** in the **RLST** column, then press **Enter** to display the “change requested” message; press **Enter** again to display ADFUNC.

2.D Type **A** in the **CMD** column next to SGCONTRL, then press **Enter** to activate it.

Note: The suffix changes for SGCONTRL remains in effect until SVOS is stopped or until you change them to new values.

Step 3 In *?prefix*.UBBSAMP(IVPSGC01), follow the user instructions, then save and submit the member.

Note: Use the same *?prefix* qualifier that you assigned to SMFLSTSC and SMRLSTSC in steps 4 and 5.

Step 4 Review the output from the IVPSGC01 job and verify that the job accomplished the following:

- allocated a data set
- displayed information about account IVPPERM
- deleted the data set
- again displayed information about account IVPPERM

Task 6e: Test the CDS Query

Step 1 Set the TIME command to include the time period for which you want to retrieve data. To set the TIME command, type TIME on the command line. Type HELP TIME for information about the command.

Step 2 Under Tape & HSM Views on the EZSRM Menu, select **DFSMS/HSM** to access the EZSRMHSM Menu.

Step 3 Under DFHSM CDS Query Views on the EZHSM Menu, select **Migrated data set view** to advance to the HSMMGDSU data-entry panel.

Step 4 On HSMMGDSU, complete the following fields:

- in the **<== Type S to process request** field, type **S**
- in the **Data set name level** field, type a DSN mask for data sets that you know are migrated. For example, type TEST/ to match all data sets that begin with TEST.
- in the **Data set type** parameter field, type **All**
- in the **Migration level** parameter field, type **A**

- in the **Include catalog information** parameter field, type **Yes** (or **Y**)

Step 5 Press **Enter** to display the MAINVIEW SRM HSM Migrated data set report.

If the data set report is not displayed, check the following:

- Did you use a valid password?
- Did you correctly specify the data set name mask?
- Is the HSM collector started? Type COMPSUMM as a primary command to see the Component Status view. Make sure that the HSM collector is active.

Task 6f: Test the HSM Log Extraction

Step 1 Set the TIME command to include the time period for which you want to retrieve data. To set the TIME command, type TIME on the command line. Type HELP TIME for information about the command.

Step 2 Under Tape & HSM Views on the EZSRM Menu, select **DFSMS/HSM** to access the EZSRMHSM Menu.

Step 3 Under EasyHSM Views on the EZSRMHSM Menu, select **Error summary** to advance to the HSMMGDSU data-entry panel.

Step 4 On HSMMGDSU, complete the following fields:

- in the **<== Type S to process request** field, type **S**
- in the **Data set name** field, type **/**

Step 5 Press **Enter** to display the Error Summary report. (Use **F11** to scroll right, and use **F10** to scroll left.)

This report should contain data, even if all migrations, recalls, backups, and recoveries completed successfully. If the report does not display data, check the following:

- Did you use a valid password?
- Was there any DFHSM activity on this system?
- Did the job (JCLHSMLX) create an output data set?

- Was there any data in the DFHSM LOGY file?

Note: Some systems use automation to back up and clear the DFHSM log files as soon as DFHSM swaps the logs. If your system backs up and clears the DFHSM log files, see the *MAINVIEW SRM Reporting Reference Manual* for instructions on how to extract log data from the backup files.

Task 7: Test the Automation Component

If you are not licensed for the Automation component, skip this task. If you are licensed for the Automation component, you must verify that Event Generation and AUTO functions are operational.

Task 7a: Test Event Generation

These instructions describe how to generate an event from the StopX37/II SPACPRIM function. If you are not licensed for StopX37/II, select a function for a product that you are licensed to use.

- Step 1** From the AutoOPERATOR primary menu, select **Basic and Advanced Automation** to advance to the Automation menu.
- Step 2** From the Automation menu, select **Display/Modify Rules and Rule Sets**. Verify that Rule Set RULSRS02 is enabled.
- Step 3** Copy *?prefix.BBSAMP(IVPESA01)* to *?prefix.UBBSAMP(IVPESA01)*.
- Step 4** Under Administration on the MAINVIEW SRM menu, select **Component Status**.
- Step 5** To start the Automation component, type **S** the **CMD** field next to Storage Automation and press **Enter**.
- Step 6** Under Administration on the EZSRM Menu, select **Parmlib Members** to advance to the EZSRMP Parmlib Members menu.
- Step 7** Under SRM Parmlib Members, select **All Active Members**.
- Step 8** Type **E** in the **CMD** column next to SMMSYS00, the active system member, then press **Enter**. The SMSYS00 member is displayed.
- Step 9** Verify that there is an **EVNT** parameter with a value of **00** in SMMSYS00, then press **F3** to exit the member.

- Step 10** From the active parmlib member list, type **E** in the **CMD** column next to SMEVNT00, the active event member, then press **Enter**. The SMEVNT00 member is displayed.
- Step 11** Verify that an EVNTID parameter with a value of U0001 is shown in SMEVNT00, then press **F3** to exit the member.
- Step 12** Under Administration on the EZSRM Menu, select **Functions** to display the ADFUNC view.
- Step 13** Locate the SPACPRIM function. Type **ER** (for Edit RLST), in the **CMD** field next to it and press **Enter**. The SMRLST18 member is displayed.
- Step 14** Change the ?\$IVPJOB in the RLST to the job name to be used in the IVPESA01 job in Step 16.
- Step 15** Verify that an **EVNTID** parameter with a value of **U0001** is in SMRLST18, then press **F3** to exit the member.
- Step 16** In *?prefix*.UBBSAMP(IVPESA01), follow the user instructions, then save and submit the member.
- The U0001 event is sent to AutoOPERATOR. A Rule in Rule Set RULSRS02 causes the event to be displayed in the AutoOPERATOR Journal. The AutoOPERATOR Journal is available from the AutoOPERATOR main menu.
- Step 17** Use the Events view to see the event count increase when the event is sent. To access the Events view, under Tools and Menus on the EZSRM Menu, select **Automation** to advance to the Automation Options menu.
- Step 18** From the Automation Options menu, select **Event Statistics** and verify that the number of events requested has been incremented.

Task 7b: Test AUTO Functions

If you are not licensed for MAINVIEW SRM Automation, skip this task. If you are licensed for MAINVIEW SRM Automation, follow the steps below:

- Step 1** Under Administration on the EZSRM Menu, select **Functions** to display the ADFUNC view.

Verify that AUTODS is listed in the Function column, the Status is Y, and that the FLST and RLST suffix listed is AD.

Step 2 Edit the SRMJOB01 member in *?prefix*.UBBSLIB library, which should be concatenated in the BBSLIB DD statement in your SVOS subsystem PROC JCL statements.

Edit the job card to suit your site standards. Note that SYSIN statements and some JCL statements are coded as comments to allow the this IVP to run without actually manipulating data sets. Leave them as they are for the IVP procedure.

Step 3 From the MAINVIEW SRM AutoOPERATOR main menu, select **Basic and Advanced Automation** to advance to the Automation menu.

Step 4 On the Automation menu, select **Display/Modify Rules and Rule Sets**.

Verify that Rule Set RULSRS01 is enabled.

Step 5 Select the RULSRS01 Rule Set to advance to the Rule Set Overview panel. Select rule SRS01001 and then enter **SV** to advance to the Variable Dependencies panel.

Step 6 On the Variable Dependencies panel, SRM* is listed in the Variable Value column. Change the SRM prefix to the job name prefix you used in Step 2. For example, if you used MYJOB005 as the job name, change SRM* to MYJOB005 or MYJOB*.

Step 7 Repeat Step 5 and Step 6 for each SRS01*nnn* Rule ID in the RULSRS001 Rule Set. Remember to save the changes when you exit the Rule Set Overview.

Step 8 From the operator console, issue the following command:

```
F mvsrmas ,SVOS AUTODS VOL=xxxxxx ,SOL=COMPRLSE
```

where *mvsrmas* is the name of your MAINVIEW SRM started task and *xxxxxx* is the volume serial number of a volume online to your system. Select a volume that you know has at least one data set that has multiple extents.

Step 9 Under Tools and Menus on the EZSRM Menu, select **Automation** to advance to the Automation Options menu.

Step 10 From the Automation Options menu, select **Automated Resources** to advance to the AUTO view. Under **Resource Name**, you should see the name of the volume you specified in Step 8. If the SRMJOB01 skeleton member that was submitted is waiting or is still running, you should see WAITING in the Status column.

Assuming data sets that match the FLST/ RLST criteria for the COMPRLSE solution were found on the volume you selected, the job submitted should end with a RC=12 (because the control cards are coded as comments). Check the output of the job and ensure the variable substitutions were made.

If the FLST/RLST criteria were not met, no job would have been submitted. If this happens, consider reissuing the command using a different volume or change the FLST/RLST criteria for this solution.

For more information about the Automation component, see the *MAINVIEW SRM Automation User Guide*.

Where to Go from Here

The instructions in this manual are intended to help you to verify that MAINVIEW SRM has been successfully installed to run on your systems. For more information for customizing MAINVIEW SRM beyond installation verification, see the following manuals:

- *MAINVIEW SRM User Guide and Reference*
- *MAINVIEW SRM Allocation EasyPOOL User Guide and Reference*
- *MAINVIEW SRM Automation User Guide*
- *MAINVIEW SRM StopX37/II User Guide and Reference*
- *MAINVIEW SRM Reporting User Guide*
- *MAINVIEW SRM Reporting Reference Manual*

Appendix A Migrating from Earlier Versions

This appendix explains migration considerations for users who are upgrading from earlier versions of MAINVIEW SRM products. The following topics are discussed:

Migration Considerations for All Users	A-2
MAINVIEW SRM Components	A-2
SVOS Started Task JCL	A-3
Backward Incompatibility	A-4
New SMMSYSxx Parameters	A-4
Changes to Batch Reporting	A-6
Migrating from Versions Earlier than 6.1	A-6
Changes Related to MAINVIEW Infrastructure	A-6
Sysplex Support	A-6
CLIST Changes	A-7
Migrating from AutoOPERATOR	A-8
Migrating from EasyHSM	A-9
Migrating from StorageGUARD	A-10
Changes to Data Collectors	A-10
Changes to the VTOC Scan Facility	A-10
Changes to StorageGUARD Versions Earlier than 6.1	A-11
Migrating from SG-Control	A-12
Upgrading Application Records	A-12
Migrating from Versions 4.1 and Later	A-12
Migrating from Version 3.1	A-13
Migrating from SG-Auto	A-13
Migrating from RESOLVE SRM Explorer	A-13
Migrating from HIPER-CACHE	A-13

Migration Considerations for All Users

In the migration process, you create a new MAINVIEW SRM parmlib. In “Step 2: Copy Installation Parm Library to Your Library” on page 2-10, you copy members from the earlier version into the new parmlib. Thus, current system, pool, rule list, filter list, calendar, SMS pool, function, event, critlist, and other definitions are brought forward.

Note: If you copy your old SMMSYS keywords, then you must add the new ones to your library (see “New SMMSYSxx Parameters” on page A-4).

Because JCL requirements can be different from one release to another, BMC Software recommends that you use only sample JCL from the BBSAMP library for the current release of the product. Using older JCL can cause unexpected results.

MAINVIEW SRM Components

The MAINVIEW SRM version 7.2 product suite is comprised of the components listed in the left column of Table A-1. The new names replace the products listed in the right column.

Table A-1 **New Product Names**

New Component Names	Replaces Old Product Names
MAINVIEW SRM Allocation	EasyPOOL EasySMS StopX37/II
MAINVIEW SRM Automation	Enterprise Storage Automation
MAINVIEW SRM Reporting	EasyHSM StorageGUARD SG-Control

The MAINVIEW SRM Reporting product is comprised of the following collectors:

- application collector
- HSM collector
- performance collector
- space collector
- space alternate collector

With the exception of StopX37/II, when you purchase an upgrade for one product in a component, you are authorized to use all products in the component. For example, when you upgrade to MAINVIEW SRM Reporting, you are authorized to use the products known as EasyHSM, StorageGUARD, and SG-Control in earlier MAINVIEW SRM releases.

StopX37/II is available as a stand-alone product without the MAINVIEW interface.

Note: When SVOS is started, all parts of a licensed component are automatically started. You can override this process by using SMMSYS:xx keywords. For information about using the keywords, see the *MAINVIEW SRM User Guide and Reference*.

SVOS Started Task JCL

In MAINVIEW SRM version 7.2, extensive changes were made to the SVOS started task JCL; therefore, BMC Software recommends that you use the new JCL that is provided, rather than attempting to update your current JCL.

If you prefer to update your current JCL, be aware of the following changes:

- In earlier versions of MAINVIEW SRM, the suffix of the SMMSYS:xx member was specified in the SVOS START command. The SVOS component can now be started automatically at loader start; therefore, the suffix specification has been moved to the PARM= keyword of the EXEC statement in the SVOS started task JCL.

You can use the new SYS=xx PARM= keyword in the EXEC statement in the SVOS started task JCL. This keyword specifies the suffix of the SMMSYS:xx member that is to be used when starting SVOS. The default value is SYS=00 (zero, zero).

- Add the following new DD statements in the JCL:
 - ACTLOG01 - ACTLOG:xx specifies the audit log files used by MAINVIEW SRM components to track activity of various functions

The files are defined during MAINVIEW SRM customization and cannot be shared by SVOS address spaces on other systems.

 - BBSLIB specifies the data sets that contain skeleton JCL members used by the MAINVIEW SRM Automation component

These data sets are created during SMP installation. If you are running StopX37/II without MAINVIEW, this DD statement is not needed and is ignored if you specify it.

- Remove the now-obsolete SVSTART parmlib member from the JCL. In earlier product versions, it was specified in the PARMLIB DD statement in the MAINVIEW SRM started task JCL.

Backward Incompatibility

Because of extensive changes in view invocation and navigation operations in MAINVIEW SRM and in the structure of the service points that are registered to MVI, do not use an SSI context to include both a version 7.2 and an earlier MAINVIEW SRM server across multiple systems. MAINVIEW allows the attempt, but unpredictable results can occur.

In version 7.2, the VTOC scan facility underwent extensive changes. Therefore, you must delete and recreate any views that you customized in earlier versions.

All view input parameters have been removed. Any view customization made to menus or hyperlinks must be deleted and recreated using the SETSRM command. The SETSRM command is discussed in *MAINVIEW SRM Reporting User Guide*.

New SMMSYSxx Parameters

Table A-2 describes the SMMSYSxx global parameters that are new to MAINVIEW SRM version 7.2. For more information about the global parameters, see the *MAINVIEW SRM User Guide and Reference*.

Table A-2 New SMMSYSxx Global Parameters (Part 1 of 2)

Parameter	Description
SG_VVDSINFO	indicates whether the VVDS size and percentage used should be calculated for each volume processed by the space collector
START_ALL=Y/N	specifies whether to start the all components
START_ALLOC=Y/N	specifies whether to start the Allocation component
START_AUTO=Y/N	specifies whether to start the Automation component
START_EHSM=Y/N	specifies whether to start the HSM collector
START_EPOOL=Y/N	specifies whether to start the EasyPOOL subcomponent

Table A-2 New SMMSYSxx Global Parameters (Part 2 of 2)

Parameter	Description
START_ESMS=Y/N	specifies whether to start the EasySMS subcomponent
START_RPRT=Y/N	specifies whether to start the Reporting component
START_SGA=Y/N	specifies whether to start the SG-Auto subcomponent
START_SGC=Y/N	specifies whether to start the application collector
START_SGD=Y/N	specifies whether to start the space collector
START_SGP=Y/N	specifies whether to start the performance collector
START_X37=Y/N	specifies whether to start StopX37/II
STOPX37II=Y/N	specifies whether a full-function or limited-function version of StopX37/II is started at system start-up
STOPXONLY=Y/N	specifies whether the StopX37/II is to run without the other Allocation subcomponents
VSCAN_AGER1= <i>nnn</i> VSCAN_AGER2= <i>nnn</i> VSCAN_AGER3= <i>nnn</i> VSCAN_AGER4= <i>nnn</i> VSCAN_AGER5= <i>nnn</i> VSCAN_AGER6= <i>nnn</i> VSCAN_AGER7= <i>nnn</i> VSCAN_AGER8= <i>nnn</i> VSCAN_AGER9= <i>nnn</i>	these nine parameters specify the high end of each of the nine data set age ranges. The ranges are used in the Reporting component's Data Set Management views.
VSCAN_PCTR1= <i>nnn</i> VSCAN_PCTR2= <i>nnn</i> VSCAN_PCTR3= <i>nnn</i> VSCAN_PCTR4= <i>nnn</i> VSCAN_PCTR5= <i>nnn</i> VSCAN_PCTR6= <i>nnn</i> VSCAN_PCTR7= <i>nnn</i> VSCAN_PCTR8= <i>nnn</i> VSCAN_PCTR9= <i>nnn</i>	these nine parameters specify the high end of each of the nine data set percentage-used ranges. The ranges are used in the Reporting component's Data Set Management views.
VSCAN_SIZR1= <i>nnnnnnnn</i> VSCAN_SIZR2= <i>nnnnnnnn</i> VSCAN_SIZR3= <i>nnnnnnnn</i> VSCAN_SIZR4= <i>nnnnnnnn</i> VSCAN_SIZR5= <i>nnnnnnnn</i> VSCAN_SIZR6= <i>nnnnnnnn</i> VSCAN_SIZR7= <i>nnnnnnnn</i> VSCAN_SIZR8= <i>nnnnnnnn</i> VSCAN_SIZR9= <i>nnnnnnnn</i>	these nine parameters specify the high end of each of the nine data set size ranges. The ranges are used in the Reporting component's Data Set Management views.

Changes to Batch Reporting

If you used the RESOLVE SRM Batch Reporter, the batch reports you coded might still be valid. For batch reporting information, see the *MAINVIEW SRM Reporting User Guide*.

MAINVIEW SRM also supports the batch reporting facility common to all MAINVIEW products. For more information, see the manual *Using MAINVIEW*.

Migrating from Versions Earlier than 6.1

MAINVIEW SRM versions 6.1 and later use MAINVIEW Infrastructure (MVI) architecture and support sysplex. The information in this section explains the changes that are involved in the migration process.

Changes Related to MAINVIEW Infrastructure

The new global parameter BBI3_SSID must be added to the SMMSYS $_{xx}$ member in the order that is specified in “Step 5: Update MAINVIEW SRM Global Parameters” on page 2-13. This parameter specifies the coordinating address space (CAS) subsystem name to which the SVOS product address space (PAS) should connect.

Warning! Connection to the CAS is *required* to use the MAINVIEW SRM panels. You can accept the default of BBCS during AutoCustomization.

To update the value of BBI3_SSID, you must stop and restart SVOS; it cannot be refreshed. The CAS subsystem name is specified in the SSID= parameter on the PARM= keyword for the CAS JCL EXEC statement.

Sysplex Support

The new shared parmlib facility enables you to implement and maintain MAINVIEW SRM systems by coding statements in a shared OS/390 partitioned data set (PDS). MAINVIEW SRM parmlib members support new INC/EXC parameters to the SET statement and enable you to override certain SET statements. You might choose to share SMMSYS $_{xx}$ but not SMPPOOL $_{xx}$ or other members.

The same parameters that are used in the nonshared environment are supported in the shared environment. To accommodate a shared parmlib environment, the INC/EXC keywords FORSYSID, FORSMFID, and FORPLEXNAME are valid in the following members:

- SMMSYS $_{xx}$
- SMFUNC $_{xx}$
- SMPOOL $_{xx}$
- SMFLST $_{xx}$
- SMRLST $_{xx}$
- SMDIAG $_{xx}$
- SMEVNT $_{xx}$
- SMCRT $_{xx}$
- SMCALS $_{xx}$
- SMSPOL $_{xx}$
- SMVARS $_{xx}$

See the MAINVIEW SRM *User Guide and Reference* for details.

Note: Sharing parmlib members requires a well-thought-out naming convention to prevent pools from having the same name and different characteristics on different systems.

CLIST Changes

Because COSSINIT and COSSTART have been replaced in MAINVIEW, you must establish a new CLIST. See “Step 10: Create Started Task Procedures” on page 2-19 for instructions.

Migrating from AutoOPERATOR

For MAINVIEW SRM Automation and AutoOPERATOR to work together in version 7.2, BBLINK must be added to the AutoOPERATOR started task JCL for the load modules IMFUSRM1 and IMFUSRM2.

The following AutoOPERATOR tailoring variables have been added, changed, or deleted in MAINVIEW SRM version 7.2. You must update any skeleton JCL members that you created and used in earlier Automation releases as shown. All skeleton JCL members that are distributed with MAINVIEW SRM Automation reflect this new usage.

Variable	Change
POOL	obsolete
SMSPOOL	obsolete
GROUP	now used for group/subpool/pool resource
RESTYPE	now a repeating variable; describes the respective resource in GROUP.n, VOL.n, or APPL.n
JOB.1	changed to JOB
FUNC.1	changed to FUNC
SOL.1	changed to SOL
USER	new variable that contains the ID of the user who initiated the automation request that was used for batch automation requests

The SMSPOOL keyword on the SVOS AUTOPOOL command has been renamed to SUBPOOL. Review any AutoOPERATOR rules or automated scheduling that issues these AUTOPOOL commands and rename the keyword if necessary.

The SMMSYS AUTO_MSGS keyword is obsolete. These messages are now available within MAINVIEW SRM in the Audit Log facility.

Existing fields in the data set, volume, and pool records have been modified and new fields have been added for FLST/RLST processing in the Automation component. Field names and their formats are described in the *MAINVIEW SRM Reporting Reference Manual*.

As of version 7.1, the following additional automated functions are available in the SMFUNC00 member that is distributed with MAINVIEW SRM. If you did not copy the entire SMFUNC00 member to your production libraries, be sure to include these new functions in your production SMFUNCxx member.

- AUTOPOOL
- AUTOVOL

-
- AUTODS
 - AUTOAPPL

MAINVIEW SRM solutions that include Enterprise Storage Automation version 7.1 and MAINVIEW SRM Automation 7.2 encompass FLST/RLST statements and event definitions. If you did not perform “Step 2: Copy Installation Parm Library to Your Library” on page 2-10, copying the entire BBPARM to UBBPARM, then you must copy the following to the UBBPARM data set:

- event definitions from the BBPARM SMEVNT00 member
- the FLST/RLST statements for the new AUTO functions which are in SMFLST and SMRLST members AP, AD, AV, and AA (for example, SMFLSTAP, SMRLSTAP, SMFLSTAD, SMRLSTAD, and so on)

Note: If you are migrating from a product version earlier than 6.1, note that Automation events can only be routed to the MAINVIEW AutoOPERATOR console. Therefore, you should update SMEVNTxx to remove the ETS value from the DEST=(AOO,ETS) keyword parameter in the member. Any ETS specification is ignored. If you specify DEST=(ETS), DEST=(AOO) is assumed. If ETS is found anywhere in the DEST= keyword, then message SVM0767I is issued. The message is only issued once, regardless of the number of times the ETS value is found.

Migrating from EasyHSM

In MAINVIEW SRM version 7.2, EasyHSM became a part of the Reporting component. If you are licensed for any one of the three products that make up the Reporting component (EasyHSM, SG-Control, or StorageGUARD), you are authorized to use all Reporting products.

If you are migrating from a version earlier than 6.1, note the following changes that were part of EasyHSM version 6.1:

- component identifier SVHSM, used to start and stop the EasyHSM component, was removed from the SVALLOC component identifier
- allocation and deallocation of the MCDS, OCDS, and BCDS files were moved to the SVHSM component startup process
- global parameters MCDS, OCDS, and BCDS were added to enable you to specify the HSM control data sets that are to be defined and allocated during EasyHSM startup

Migrating from StorageGUARD

In version MAINVIEW SRM 7.2, StorageGUARD became a part of the MAINVIEW SRM Reporting component. If you are licensed for any one of the three products that make up the Reporting component (EasyHSM, SG-Control, or StorageGUARD), you are authorized to use all Reporting products.

Changes to Data Collectors

In version 7.2, the StorageGUARD data collectors are known as the *space collector* and the *performance collector*. Both collectors are initialized during customization and are automatically started at system startup unless you specify otherwise.

You can use space and performance collector databases from version 6.1 or 7.1 in version 7.2 without any conversion process. BMC Software recommends that you allocate new database files during AutoCustomization and use them in the version 7.2 collectors. If you use earlier version files, then new data fields are not available, which can result in incomplete view data and unpredictable results from some summary views.

Changes to the VTOC Scan Facility

VTOC scan collection data sets from earlier versions cannot be used in version 7.2. BMC Software recommends that you change the VSCAN_OINDEX value, which specifies the data-set-name prefix used by the VSCAN facility, or that you delete earlier-version files that have the same prefix.

MAINVIEW SRM version 7.2 uses a new master VTOC scan collection data set for data set reporting. The master collection data set is continuously updated. When a scan is performed using the master, the volumes that qualify for the scan are identified. All data set records from these volumes are dropped from the master. The volumes are processed and new data set records are built and written to the master. This method of update enables you to split your collection into more manageable runs that are under your control.

You can specify the MASTER=YES keyword in the VTOC scan filter member, SMVSCFxx, to cause the scan output to populate the master data set. Other keywords added to SMVSCFxx allow scans to be performed by storage group, pool, and other entities.

The first time you run a scan with the MASTER=YES keyword, the master collection data set is automatically created. If the SMVSCFxx member does not specify MASTER=YES, then the output creates an individual VTOC scan collection data set, as was done in earlier versions.

The master collection data set generated name is the VSCAN_OINDX value, with .MASTER appended. The nonmaster collection data sets are the VSCAN_OINDX value, with .SMVSCFxx appended, plus the date and time. For more information about master collection data set, see the *MAINVIEW SRM Reporting Reference Manual*.

Changes to StorageGUARD Versions Earlier than 6.1

If you are migrating from a version of StorageGUARD earlier than 6.1, note the following changes:

Upgrading the Historical Space Database

No conversion is necessary to upgrade from version 4.1 and later. However, if you want to use a different set of databases, you can use the Copy/Merge utility. See Appendix B “Migration Utilities” on page B-1. BMC Software recommends that you not use databases from earlier product versions in version 7.2.

Upgrading the Historical Performance Database

If you are *upgrading from version 4.1*, use the SGPCNVD1 conversion utility member in *?prefix.BBSAMP* to convert the historical performance database to the version 5.1 format. The utility provides instructions for use. After you have upgraded to version 5.1 format, follow the steps for upgrading from 5.1 to 6.1 in the next paragraph.

In version 6.1, the historical performance database changed to a multiple file structure. If you are *upgrading from version 5.1*, use the SPC51T61 conversion utility member in *?prefix.BBSAMP* to convert the 5.1 historical performance database files to the 6.1 historical performance database structure. The utility provides instructions for use.

Warning! Before you start the conversion, you must understand the following restrictions:

- each LPAR’s historical performance database files must be converted in a single conversion run

-
- historical performance database files from *different* LPARs cannot be intermixed
 - the historical performance database file structure must be newly allocated and initialized on an LPAR prior to a conversion run

Changes to the StorageGUARD Automation Facility (SGAF)

As of StorageGUARD version 6.1, SGAF is no longer supported. You should remove the following global parameters from your SMMSYS $_{xx}$ member:

- SG_EXITVOL
- SG_EXITPOOL
- SG_EXITACCT
- SG_PROCVOL
- SG_PROCPPOOL

Migrating from SG-Control

In the version 7, you specify the application data set name by using the global parameter SGCDNS, rather than in the SGCDB DD statement of the SVOS started task JCL. Be sure to add the SGCDNS global parameter to the SMMSYS $_{xx}$ member.

Upgrading Application Records

An application record should not be used by an *earlier* product version after it has been migrated to the version 7.2 format. If you want to delay altering programs and procedures that produce reports from data that is read directly from an application database, you can use the SGCDBCNV conversion utility (see Appendix B “Migration Utilities” on page B-1). The output of the conversion process is a sequential file to be used in batch reporting and is unsuitable for collection.

Migrating from Versions 4.1 and Later

No conversion is required to migrate *from* versions 4.1, 5.1, 6.1, or 7.1 to release 7.2. **Application** records, known as **account** records in earlier versions, are automatically converted to the release 7.2 format the first time they are updated.

Migrating from Version 3.1

Version 7.2 does not support version 3.1 records. To enable the use of a version 3.1 application database, you must first convert the database to a compatible format. If you are using version 3.1 and want to upgrade to version 7.2, you must use the SGCMAINT initialization utility. For information about SGCMAINT, see the *MAINVIEW SRM Reporting Reference Manual*.

Migrating from SG-Auto

AutoCustomization does not support SG-Auto. You must add your current SG-Auto password and any other variables used by SG-Auto to SMMSYSxx after completing AutoCustomization. You can continue to use your existing started task JCL, but you may need to update the name of the BMC Software link library specified in the STEPLIB DD name if it has changed.

Migrating from RESOLVE SRM Explorer

The graphical interface for MAINVIEW SRM is MAINVIEW Explorer. See the manual *Using MAINVIEW* for more information about the interface.

MAINVIEW SRM is also capable of connecting to PATROL SRM to pass Reporting component data to the PATROL Storage DataStore. See the *PATROL Storage Manager Getting Started Guide* for connectivity information.

Migrating from HIPER-CACHE

The HIPER-CACHE product is not supported under the MAINVIEW SRM version 7.2 loader subsystem (SVOS). Contact your sales representative to upgrade to Batch Optimizer.

If you want to continue to use the HIPER-CACHE product, run the loader subsystem version that was supplied with the HIPER-CACHE product on the same OS/390 system as MAINVIEW SRM version 7.2. The HIPER-CACHE product *can* be started using that loader subsystem. The HIPER_CACHE product cannot be started under the MAINVIEW SRM version 7.2 loader.

Appendix B Migration Utilities

This appendix provides information about utilities that you can use for specific purposes when you migrate from an earlier version to MAINVIEW SRM version 7.2. The following topics are discussed:

Application Collector SGCDBCNV Utility	B-2
Space Collector Copy/Merge Utility	B-2

Application Collector SGCDBCNV Utility

An application record should not be used by an *earlier* version after it has been migrated to the version 6.1 or later format. If you want to delay altering programs and procedures that produce reports from data read directly from an application database, you can use the SGCDBCNV utility.

SGCDBCNV copies a version 7.2 application database and converts the records back to 5.1 format during the copy. The output of the utility is a copy of the database in sequential file format. You can then execute the procedures and programs against the copy of the database to produce reports.

Note: Use the database copy that the SGCDBCNV creates only for reporting. The database copy should *not* be updated by the application collector.

A sample of the SGCDBCNV utility is provided in *?prefix.BBSAMP*. Carefully follow the user instructions in the utility.

Warning! Do not use the SGCDBCNV utility to make a back-up copy of a database.

Space Collector Copy/Merge Utility

Use the Copy/Merge utility (SGRDCOPY) to complete the following tasks:

- use space databases from earlier versions of the product
- expand the space database to accommodate new functionality
- create a backup for the active space database
- reorganize the database if the space collector encounters a name table overflow

You can tailor the Copy/Merge utility so that the time interval and the time step between snapshots become a subset of the input snapshots. This utility is particularly useful when you are creating a backup for the active historical space database (for example, you are requesting calendar-month or year information).

You *must* use this program to reorganize the database if the historical space data collector encounters a name table overflow (message SGRD64E).

You can also use the Copy/Merge utility to expand the historical space database to accommodate new functionality if you are upgrading from version 3.1 or earlier. Expanded databases, after that are updated with RAID or RVA information, cannot be used by the earlier versions.

Sample JCL is in the SGDCOPYJ member in *?prefix.BBSAMP*. Copy SGDCOPYJ to UBBSAMP before you modify it for your site.

Warning! Do not use SGRDCOPY on empty or unused files. Doing so can result in looping.

Copy/Merge Processing Options

Processing options tell the Copy/Merge utility the kind of processing that it should perform. You must use the PARM= job control parameter to specify the processing options. This section describes the options and descriptions that are available. Define each option by using a keyword parameter. Keywords are listed in alphabetical order, and each keyword parameter can be specified only once.

ACTION=COPY | BACKUP

Optional; defines the action that the Copy/Merge utility must take when the first defined extent fills during the writing of the output data set.

Default value: **COPY**

Abbreviations: Action=

ACTION=COPY specifies that the Copy/Merge utility should behave just like the data collector. That is, the Copy/Merge utility should perform a wraparound when the first extent is full on the output data set, thus overwriting the oldest snapshot with the next one. This action ensures that the defined size for the output data set is used.

ACTION=BACKUP is used when no wraparound should occur. In other words, the Copy/Merge utility allows secondary extents to be allocated when the first extent fills. Use this option when you do not want to calculate the exact size of the data set that contains a given amount of information or when you do not want to lose space by allocating more space than is necessary.

BEGIN=*date of oldest snapshot to be copied*

Optional; defines the date of the oldest snapshot that should be included in the output data set. Snapshots that were created earlier than the specified date are excluded from the copy operation. If this parameter is omitted, no filtering for the oldest record takes place.

Abbreviations: BEGi=

Supported date formats:

YY.DDD
YYYY.DDD
DD/MM/YY
DD-MM-YY
DD.MM.YY
DD/MM/YYYY
DD-MM-YYYY
DD.MM.YYYY

END=*date of last snapshot to be copied*

Optional; defines the date of the latest (most recent) snapshot that should be included in the output data set. Snapshots that were created after the specified date are excluded from the copy operation. If this parameter is omitted, no filtering for the most recent record takes place.

Supported date formats:

YY.DDD
YYYY.DDD
DD/MM/YY
DD-MM-YY
DD.MM.YY
DD/MM/YYYY
DD-MM-YYYY
DD.MM.YYYY

MAXACCNTCODES=number of account codes used****

Optional; defines the number of different account codes that the output data set must accommodate. Valid values are between 325 and 65535.

Default: 325

Abbreviations: MAXACCNTCODEs=, MAXACCTCODEs=

MININTERVAL=*minimum time interval between permanent snapshots in minutes*

Optional; specifies the minimum time step in minutes between snapshots that are written to the output data set; used only to exclude snapshots that are already present on the input, thus allowing the same data set size to cover a longer (although less detailed) history.

In particular, MININTERVAL has meaning only when it defines a greater value than the time interval that is used on the input data set (likely determined through the WRITEINTERVAL parameter on the data collector).

If you define a value that is not greater than the value that is in effect in the input data set, or if you omit this parameter, all complete snapshots are copied to the output data set.

Valid values: between 1 and 1,440

Abbreviations: **MININ**Terval=, **MINNTVI**=, **INTERVal**=, **NTVL**=

SMFID=0 or SMF record number

Required; allowed only when reading SMF input; specifies for the Copy/Merge utility which SMF records are to be selected when it reads SMF input. The same record number that was defined earlier for the data collector must be defined for this keyword.

Abbreviations: **SMFid**=

TYPE=VOLUME | POOL | ACCOUNT

Required; specifies for the Copy/Merge utility the type of records to be copied.

VERSION=1.1 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 3.1 | 4.1 | 5.1 | 6.1 | 7.1 | 7.2

Optional; specifies for the Copy/Merge utility the version of input records that are to be copied or converted.

The output data set is always formatted according to the most recent version. The Copy/Merge utility verifies that the input records correspond to the version that is defined (or used by default). Record (format) conversion is performed as required when you define versions older than the current one.

Default value: the most recent version

Abbreviations: **VER**sion=

Index

A

- application A-12
- application collector
 - converting
 - parameters B-1
- authorization requirements 1-4
- AutoOPERATOR
 - predefined solutions 5-2
 - use with MAINVIEW SRM Automation 5-2

B

- batch reports
 - coding A-6
- BBSAMP members
 - SGCDBCNV B-2
 - SGDCOPYJ B-3
 - SGPCNVD1 A-11

C

- CA-ACF2 1-4
- conversion utility A-12, B-2
- copy/merge utility
 - keywords B-3
 - processing options B-3
- customization 6-15
- customization tasks
 - EasyHSM 3-1
 - MAINVIEW SRM Automation 5-1
 - PATROL 4-1

D

- database
 - conversion A-12, B-2
- define a pool 6-3
- DFHSM log files 3-1

E

- EasyHSM
 - customization tasks 3-1
 - log extraction program 3-1
- ESM enhanced security 1-4
- Explorer
 - migration considerations A-13

F

- FORPLEXNAME
 - global parameter A-7
- FORSMFID
 - global parameter A-7
- FORSYSID
 - global parameter A-7

G

- global parameters
 - FORPLEXNAME A-7
 - FORSMFID A-7
 - FORSYSID A-7

H

HIPER-CACHE

- support A-13

historical performance

- database conversion A-11

historical space

- database conversion A-11

- verify databases 6-8

I

installation

- considerations 1-4

- customization 6-15

IVPs 6-1

L

link-edit JCL for TCP/IP

- PATROL 4-3

log extraction

- program 3-1

- verify 6-11

M

MAINVIEW

- start interface 6-2

MAINVIEW SRM Automation

- customization tasks 5-1

- IVP 6-12

migration 1-5

- from RESOLVE SRM A-1

- to MAINVIEWSRM A-1

migration considerations

- application collector conversion utility A-12

- BBI3_SSID global parameter A-6

- Coordinating Address Space (CAS) A-6

- for all users A-2

- for EasyHSM users A-9

- for Enterprise Storage Automation users A-8

- for HIPER-CACHE users A-8

- for RESOLVE SRM Explorer users A-13

- for SG-Control users A-12, A-13

- for StorageGUARD users A-10

- for sysplex users A-6

- historical performance database A-11

- historical space database A-11

- SGCDSN global parameter A-12

- StorageGUARD Automation Facility

 - (SGAF) A-12

- SVOS Product Address Space (PAS) A-6

O

- OS/390 and z/OS Installer 1-2

P

PATROL

- customization tasks 4-1

- link-edit JCL for TCP/IP 4-3

pool

- define 6-3

predefined solutions

- set up 5-2

prerequisites 1-2

- authorization requirements 1-4

- space requirements 1-4

- system software requirements 1-2

product compatibility

- running with other versions 1-5

R

releases

- supported A-12

S

SGAF

- support A-12

- SG-Auto 2-4, A-13

- SGCDBCNV A-12

- application collector conversion utility

 - A-12, B-2

- SMMSYSxx 2-11, 2-13, 2-16, A-3, A-4, A-6,

 - A-7, A-12

- software prerequisites 1-2

space requirements 1-4
start MAINVIEW interface 6-2
start SVOS 6-2
START_EHSM A-4
START_EPOOL A-4
START_ESA A-4, A-5
START_ESMS A-5
START_SGA A-5
START_SGC A-5
START_SGD A-5
START_SGP A-5
START_X37 A-5
starting MAINVIEW SRM components
 application collector A-2
 HSM collector A-2
 performance collector A-2
 space alternate collector A-2
 space collector A-2
supported releases A-12
SVOS
 start 6-2
system software requirements 1-2

T

TCP/IP
 link-edit JCL 4-3
 transaction scheduler 4-3
transaction scheduler 4-3
 stop 4-3

U

upgrade A-1
upgrading
 SG-Control B-1
utilities
 conversion A-12, B-2

V

verification tasks 6-1

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. THIS AGREEMENT WILL APPLY TO THE PRODUCT, UNLESS (1) YOU AGREED TO A WEB BASED LICENSE AGREEMENT WITH BMC WHEN ORDERING THE PRODUCT, IN WHICH CASE THAT WEB BASED LICENSE AGREEMENT GOVERNS THE USE OF THE PRODUCT, OR (2) IF YOU DID NOT AGREE TO A WEB BASED LICENSE AGREEMENT WITH BMC WHEN ORDERING THE PRODUCT AND YOU HAVE A WRITTEN LICENSE AGREEMENT WITH BMC, THEN THAT WRITTEN AGREEMENT GOVERNS THE USE OF THE PRODUCT. THE ELECTRONIC AGREEMENT PROVIDED WITH THE PRODUCT AS PART OF THE INSTALLATION OF THE PRODUCT WILL NOT APPLY. 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 by 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. BMC 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 BMC Products are and contain valuable confidential information of BMC (“**Confidential Information**”). Confidential Information means non-public technical and non-technical information relating to the BMC 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, audit 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

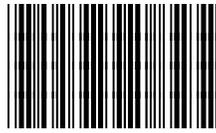
PROPRIETARY RIGHTS. ALL ARBITRATION PROCEEDINGS SHALL BE CONDUCTED IN CONFIDENCE, AND THE PARTY PREVAILING IN ARBITRATION SHALL BE ENTITLED TO RECOVER ITS REASONABLE ATTORNEYS' FEES AND NECESSARY COSTS INCURRED RELATED THERETO FROM THE OTHER PARTY.

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 EULA Int 030102

Notes



27837