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About This Book

This guide describes how to configure and customize OMEGAMON II® for MVS. It assumes that you have already installed the product as described in the Installing Candle Products and Candle Management Server on MVS manual.

This guide contains the following types of information to help you plan and perform configuration and customization:

- a list of product publications
- background about the product components
- maintenance and migration considerations
- an overview of the installation, configuration, and customization process
- configuration and customization instructions

Who should read this book

This guide is intended for users of OMEGAMON II for MVS, including product administrators and system programmers. It is a hands-on guide that provides the information you need to configure OMEGAMON II for your site and quickly start monitoring your MVS network.

Terminology

Throughout this document, the term OMEGAMON II is used as an abbreviated form of OMEGAMON II for MVS. Similarly, OMEGAMON is used as an abbreviated form of OMEGAMON for MVS, and EPILOG is used as an abbreviated form of EPILOG for IMS.
Notation conventions

This document uses the following conventions when referring to high-level qualifiers.

hilev  A high-level qualifier. The high-level qualifier is the first prefix or set of prefixes in the dataset name. This document refers to site-specific high-level qualifiers in italics. For example,

- thilev refers to the high-level qualifier for your target dataset.
- rhilev refers to the high-level qualifier for your runtime dataset. (For members in target libraries, the high-level qualifier is thilev rather than rhilev.)
- shilev refers to the SMP/E library high-level qualifier.

-HILEV- This notation refers to the high-level qualifier in specific JCL. Replace this with the appropriate high-level qualifier that is specific to your site.

The mid-level qualifier is used to distinguish multiple copies of the runtime environment. This qualifier allows a unique name to be created for each copy while allowing for a common high-level qualifier. Together these two qualifiers are described as rhilev.midlev.

Documentation set information

- OMEGAMON II for MVS Configuration and Customization Guide, V520, M251-6351
- OMEGAMON II for MVS User’s Guide, V520, M254-6352
- OMEGAMON II for MVS Command Language Reference, V520, M253-6353
- OMEGAMON II for MVS EPILOG Command Language Reference, V520, M253-6354
- OMEGAMON II for MVS Quick Reference, V520, M299-6355
Where to look for more information

For more information related to this product, please see the

- technical documentation CD-ROM that came with your product
- technical documentation information available on the Candle Web site at www.candle.com
- online help provided with this product

Online documentation

With V520, Candle Corporation has moved OMEGAMON II for MVS manuals from IBM BookMaster to Adobe FrameMaker. This move was made to better enable us to address our customers’ needs by providing tools that enhance productivity.

One of the results of the move is that it is no longer possible to create BookManager versions of the OMEGAMON II for MVS manuals. However, the manuals remain available online in the Adobe PDF version on CD-ROM and are also available on the Candle Corporation website at www.Candle.com.

The documentation CD being provided with this release has robust and easy-to-use search capabilities. You can search for information in multiple volumes, multiple versions, and across products. The CD also provides easy setup of search indexes with a single click of the mouse.

Ordering additional documentation

To order additional product manuals, contact your Candle Customer Support representative.

We would like to hear from you

Candle welcomes your comments and suggestions for changes or additions to the documentation set. A user comment form, located at the back of each manual, provides simple instructions for communicating with the Candle Information Development department.

You can also send email to UserDoc@candle.com. Please include "OMEGAMON II for MVS Configuration and Customization Guide" in the subject line.
Printing this book

Candle supplies documentation in the Adobe Portable Document Format (PDF). The Adobe Acrobat Reader will print PDF documents with the fonts, formatting, and graphics in the original document. To print a Candle document, do the following:

1. Specify the print options for your system. From the Acrobat Reader Menu bar, select **File > Page Setup...** and make your selections. A setting of 300 dpi is highly recommended as is duplex printing if your printer supports this option.

2. To start printing, select **File > Print...** on the Acrobat Reader Menu bar.

3. On the Print pop-up, select one of the **Print Range** options for
   - All
   - Current page
   - Pages from: [ ] to: [ ]

4. (Optional). Select the Shrink to Fit option if you need to fit oversize pages to the paper size currently loaded on your printer.

Printing problems?

The print quality of your output is ultimately determined by your printer. Sometimes printing problems can occur. If you experience printing problems, potential areas to check are:

- settings for your printer and printer driver. (The dpi settings for both your driver and printer should be the same. A setting of 300 dpi is recommended.)
- the printer driver you are using. (You may need a different printer driver or the Universal Printer driver from Adobe. This free printer driver is available at www.adobe.com.)
- the halftone/Graphics color adjustment for printing color on black and white printers (check the printer properties under **Start > Settings > Printer**).
- the amount of available memory in your printer. (Insufficient memory can cause a document or graphics to fail to print.)

For additional information on printing problems, refer to the documentation for your printer or contact your printer manufacturer.

Contacting Adobe

If additional information is needed about Adobe Acrobat Reader or printing problems, see the Readme.pdf file that ships with Adobe Acrobat Reader or contact Adobe at [www.adobe.com](http://www.adobe.com).
Section 1.
Configuration
Background about Components and Modes of Operation

Chapter Overview

This chapter contains information about the components and modes of operation for OMEGAMON II for MVS. The chapter provides background information about the

- product components
- Candle Subsystem
- historical components
- modes of operation

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Product Components

This section provides background information about the product components for OMEGAMON II for MVS.

Product components for OMEGAMON II for MVS

The following table lists the components available when you install OMEGAMON II for MVS, provides a brief description of each component, and indicates whether the component is required or optional.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
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<tr>
<td>OMEGAMON for MVS interface (required)</td>
<td>Provides realtime information about an MVS system using the original OMEGAMON menu system interface</td>
</tr>
<tr>
<td>CUA interface - OMEGAMON II (required)</td>
<td>Provides realtime information about an MVS system using a graphical user interface</td>
</tr>
<tr>
<td>Candle Subsystem (required)</td>
<td>Provides dynamic I/O information to OMEGAMON II</td>
</tr>
<tr>
<td>CSA Analyzer (required)</td>
<td>Provides common storage usage information through the OMEGAMON II for MVS CSAA and CSAF commands</td>
</tr>
<tr>
<td>Candle Management Server (required)</td>
<td>Collects workload information for OMEGAMON II</td>
</tr>
<tr>
<td>Historical components - EPILOG (optional)</td>
<td>Gather and report historical information about an MVS subsystem</td>
</tr>
<tr>
<td>End-to-End Response Time (optional)</td>
<td>Provides OMEGAMON II with response time data</td>
</tr>
</tbody>
</table>

Process for components that are optional

When you install OMEGAMON II for MVS using CICAT, CICAT automatically installs the components that are optional. For example, CICAT automatically installs End-to-End Response Time. To make these components available, you must also:

- configure the component using CICAT
- complete the configuration and customization steps for the component using the instructions in this guide (if any)
Details about the Historical Components

This section provides background information about the OMEGAMON II historical components.

OMEGAMON II provides historical components that enable you to collect and summarize historical information about the performance of your MVS system, as well as generate reports. These components include the

- historical data collector
- historical EPILOG datastore (EDS)
- EPILOG historical reporter

These historical component features are required when using the EPILOG historical data collector. During CICAT configuration, you will specify configuration values for the historical components. You can also choose to customize the historical data collector and historical datastore.

Historical data collector

The historical data collector gathers information from the MVS system and writes it to an historical datastore.

You will need to customize the historical data collector controls, to specify the workloads, resources, and time periods for which you want to collect historical data on your system. For information on customizing historical data collector controls, see:

- “Customizing Historical Data Collector Controls” on page 153
- “Customizing Historical Data Collector Controls Using Panels” on page 157
- “Customizing Historical Data Collector Controls Using a Text Editor” on page 163

You can also customize the historical data collector controls for uninterrupted data collection. See “Setting Up the Environment for Uninterrupted Historical Data Collection” on page 181 for more information.

Note: For MVS/SP 5 or later users, the data being written to an EDS is dependent upon the MVS mode that is in effect. When MVS is operating in compatibility mode, the historical data collector writes IPS-based data to the EDS. When MVS is operating in goal mode, the historical data collector writes WLM-based data to the EDS.

Historical EPILOG datastores

The historical EPILOG datastores (EDS) capture resource and degradation data written to them by the historical data collector.

You can set up automatic maintenance of the EDS, which will ensure that there is always a datastore available to the historical data collector. See
“Setting Up the Environment for Uninterrupted Historical Data Collection” on page 181 for more information.

As part of the customization of your OMEGAMON II product you may need to add datastores, drop datastores, and switch the active historical data collector datastore. See “Managing the Environment for Uninterrupted Historical Data Collection” on page 189 for more information.

If you use the Workload Profiling Facility, you will need to specify a Profile datastore. The Profile datastore stores averaged samples of historical data that are derived from the historical datastores. For more information on the Profile datastore, see:

- “Managing Datastores” on page 177
- “Manual Maintenance of the Profile Datastore” on page 209

**EPILOG Historical reporter**

The historical reporter generates workload and system resource reports.

During customization, you can choose to run the historical reporter in ISPF, TSO full-screen, and batch modes. See “Running the EPILOG Historical Reporter in Different Modes” on page 121 for more information.

The historical reporter can also be accessed through VTAM-based OMEGAMON II by zooming into it, or by using OMEGAMON II to produce CUA-based historical reports.
Details about the Candle Subsystem

This section provides background information about the Candle Subsystem.

Candle Subsystem component

The Candle Subsystem is an MVS subsystem that enables OMEGAMON II to monitor dynamic device activity in MVS/ESA™ SP4 and higher.

When installed, the Candle Subsystem runs in its own address space, providing dynamic I/O device information to OMEGAMONs running in other address spaces.

Sharing the Candle Subsystem

You only need one Candle Subsystem for an MVS system image. A single Candle Subsystem can support multiple copies of OMEGAMON II and multiple OMEGAMON II products on a single MVS image.

The subsystem ID identifies a copy of the Candle Subsystem. To use the same Candle Subsystem for all OMEGAMON II runtime environments on a single MVS image, Candle recommends that you specify the same subsystem ID during the configuration of each OMEGAMON II product. The Candle default subsystem ID is CNDL.

System requirements

The Candle Subsystem has the following system requirements:

- The Candle Subsystem requires 4K of ECSA.
- The Candle Subsystem must be defined to MVS as a subsystem.
- The initialization module, KCNDLINT, must reside in a link list authorized library.
- An IPL is required to initialize the Candle Subsystem unless the keyword parameter form of the IEFSSNxx PARMLIB member, supported in MVS/SP 5 or above, is used. In this case, MVS dynamic SSI services can be invoked.

**Note:** The example for IEFSSNxx, a positional parameter, works as shown on OS/390 systems. If you would like to update SYS1.PARMLIB(IEFSSNxx) in accordance with IBM OS/390 documentation, then use the following syntax:

```
SUBSYS SUBNAME(CNDL)
INITRTN(KCNDLINT)
INITPARM('SSPROC=CANSCN')
```
**Details about the Candle Subsystem**

**Starting the Candle Subsystem automatically**

Member *rhilev.RKANSAM(CANSCN)* contains a sample JCL procedure for creating the Candle Subsystem. You can modify this to fit your configuration standards, and then copy it to a system procedure library.

If you want the Candle Subsystem address space to be started automatically at system IPL, then the name given to the JCL procedure must match the value of the SSPROC keyword in the IEFSSNxx member of SYS1.PARMLIB.

**Determining whether or not to install the Candle Subsystem**

You should migrate from your current Candle Subsystem, to the current version shipped with OMEGAMON II for MVS. This will ensure that new PTF maintenance gets properly installed.

The latest version of the Candle Subsystem can be used with earlier versions of the OMEGAMON products. For example, the Candle Subsystem can be used with V400 or V500 of an OMEGAMON II product.

If you have installed another OMEGAMON II product at your site, at the same level as shipped with the OMEGAMON II product you are currently installing, you may have already installed the Candle Subsystem.

**Determining the dispatching authority to use**

The Candle Subsystem is a provider of services to other Candle products and should not be made to wait for CPU service.

- If you are running in compatibility mode, you may raise the JCL dispatching priority from (14,15). Do not lower it.
- If you are running in goal mode, JCL dispatching priority is ignored. Therefore, you must make sure that the Candle Subsystem is running at a service level that will keep it from waiting for CPU service.

See “Setting Dispatch Priorities/Velocity Goals for Started Tasks” on page 83 for more information.
Modes of Operation

This section provides background information about operating modes.

During configuration, you will be asked to select and customize an operating mode. Available operating modes are:

- VTAM mode
- TSO/ISPF mode
- dedicated mode

VTAM or dedicated mode is required to run the CUA interface. You can also configure additional operating modes for the OMEGAMON interface, as described in “Installing and Running OMEGAMON for MVS in Different Modes” on page 101 and the online help available when you configure the OMEGAMON interface.

Operating mode characteristics and requirements

The following table describes each operating mode and its requirements.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Characteristics</th>
<th>Configuration Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAM</td>
<td>VTAM mode enables you to run OMEGAMON II sessions from a VTAM terminal without an intermediate online application, such as TSO. You can set automatic update mode so that the screen refreshes automatically. VTAM mode allows all VTAM terminal users to share a single copy of OMEGAMON II.</td>
<td>CICAT generates VTAM applids.</td>
</tr>
<tr>
<td>TSO and ISPF</td>
<td>TSO mode enables you to run OMEGAMON as a normal TSO command on any supported terminal. In this mode there is no auto screen refresh; the screen refreshes when you press the Enter key. ISPF mode includes split-screen capability that lets you swap between OMEGAMON and another ISPF application.</td>
<td>APF-authorize the load library specified in the CALL statement.</td>
</tr>
<tr>
<td>Dedicated</td>
<td>Dedicated mode offers high availability and does not require VTAM services. Dedicated mode uses EXCP to communicate with a terminal and refreshes the screen every few seconds. Dedicated mode allows OMEGAMON or OMEGAMON II to provide realtime data even when VTAM is not available.</td>
<td>Availability of a locally attached non-SNA terminal.</td>
</tr>
</tbody>
</table>
Chapter Overview

This chapter provides information about installing, configuring, and customizing OMEGAMON II for MVS.

Chapter Contents

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Information Covered in this Chapter

This chapter provides:

- the considerations you should review before you begin to configure and customize OMEGAMON II for CICS
- a broad overview of the installation, configuration, and customization process (as well as where you can locate the information you will need)
- background about the Candle Installation and Configuration Assistance Tool (CICAT)
- an overview of how you install OMEGAMON II for MVS using CICAT
- an overview of how you configure OMEGAMON II for MVS using CICAT and a checklist listing the steps for the CICAT configuration procedure
- a checklist listing the steps for the manual configuration procedures
- a checklist listing the steps for the manual customization procedures

If you are installing OMEGAMON II for MVS for the first time or you need a reminder about the different components and modes of operation for OMEGAMON II for MVS, see the chapter “Background about Components and Modes of Operation” on page 17.
Configuration Planning and Considerations

This section provides the considerations you must review before you begin configuring and customizing OMEGAMON II for MVS.

Requirements for hardware and software

For information about the hardware and software requirements for OMEGAMON II for MVS, see the Installing Candle Products and Candle Management Server on MVS manual.

Installing OMEGAMON II and OMEGAVIEW in separate CSIs

Candle strongly recommends that OMEGAMON II and OMEGAVIEW be installed in a shared CSI. However, if you decide to install each of these products in a separate CSI, then you must ensure that the started task JCL for the OMEGAMON II CUA interface includes the RKANMODL library for OMEGAVIEW as part of the STEPLIB and RKANMODL DD concatenations and the RKANPENU library for OMEGAVIEW as part of the RKANPENU concatenation.

Requirements for runtime datasets

Several VSAM and non-VSAM datasets need to be allocated and initialized. This requires approximately 75 tracks (measured in 3390 tracks) of additional storage. High-level qualifiers are required and mid-level qualifiers can be used, if desired.

Qualifiers for runtime datasets

In some cases, the runtime datasets may have been created while installing other Candle products. These preallocated datasets can be used for OMEGAMON II.

The configuration process allows a unique set of qualifiers for the following groups of runtime datasets:

- VSAM datasets
- non-VSAM datasets
- Candle Subsystem datasets

For information on high-level and mid-level qualifiers for runtime datasets, see “Notation conventions” on page 12.
## Migrating elements

This topic details the elements that you can migrate from OMEGAMON II V400 or V500. If you do not migrate an element, OMEGAMON II uses the V520 default.

<table>
<thead>
<tr>
<th>Item</th>
<th>Migration Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPILOG Dataset Members</td>
<td>You can copy the following members from the V400 or V500 libraries to the corresponding V520 libraries. You may have already copied these members when you configured OMEGAMON II using the CICAT. If so, skip this step.</td>
</tr>
<tr>
<td></td>
<td>- <code>rhilev.midlev.REDPARM(EDSLIST)</code> to <code>rhilev.midlev.RKANPAR(KEPEDS)</code>, which contains the historical datastore list. If you migrate this member, OMEGAMON II will access the data contained in the V400 or V500 historical datastores.</td>
</tr>
<tr>
<td></td>
<td>- <code>rhilev.midlev.REDDATA(KEPOPTN)</code> to <code>rhilev.midlev.RKANPAR(KEPOPTN)</code>, which contains the historical data collector options and filters and the performance group definitions.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Migrated members must contain the proper LOCALID and REMOTEID statements in the KEPOPTN member, with proper VTAM APPL specifications.</td>
</tr>
<tr>
<td></td>
<td><strong>Important:</strong> If you plan to run the V520 and V400 or V500 historical data collectors concurrently, you cannot use the same datastores for both collectors. Change the list of VSAM datastores on the EDSLIST keyword in member KEPOPTN so that the collectors use different datastores.</td>
</tr>
<tr>
<td>OMEGAMON Datasets</td>
<td>You can use the following datasets as they exist in V400 or V500 by changing the dataset pointer in V520 procedure members as described below. You can also migrate these datasets from earlier versions of OMEGAMON.</td>
</tr>
<tr>
<td></td>
<td>- <code>rhilev.midlev.ROMPCSV</code>, which contains user-modified OMEGAMON screen spaces and menus</td>
</tr>
<tr>
<td></td>
<td>- <code>rhilev.midlev.ROMPFSV</code>, which contains user-modified OMEGAMON profiles and exception thresholds</td>
</tr>
<tr>
<td></td>
<td>When you used the CICAT to configure OMEGAMON II, you may have already specified the V400 or V500 dataset names when you selected Specify Security and Historical Datastore Options on the Configuration Menu. If so, skip this step.</td>
</tr>
<tr>
<td>Security Configuration</td>
<td>You can migrate only NAM security to V520. To do this, do one of the following:</td>
</tr>
<tr>
<td></td>
<td>- specify the name of your V400 or V500 <code>rhilev.NAM</code> in the security member <code>rhilev.midlev.RKANPAR(KM2INNAM)</code>.</td>
</tr>
<tr>
<td></td>
<td>- copy the V400 or V500 <code>rhilev.NAM</code> (using REPRO) into the V520 dataset <code>rhilev.RKM2NAM</code>.</td>
</tr>
<tr>
<td></td>
<td>When you used the CICAT to configure OMEGAMON II, these actions were already performed for you.</td>
</tr>
<tr>
<td></td>
<td>Other security configurations that you defined, such as OMEGAMON command-level, RACF, CA-ACF2, and CA-TOP SECRET, must be reconfigured for the V520 system.</td>
</tr>
<tr>
<td>OMEGAMON II Profiles</td>
<td>Using REPRO, you can copy the following VSAM dataset to the corresponding V520 dataset. You may have already copied these datasets when you configured OMEGAMON II using the CICAT. If so, skip this step.</td>
</tr>
<tr>
<td></td>
<td>- <code>rhilev.TB</code> to <code>rhilev.RKM2TDB</code>, which contains administrator settings and customized profiles that include performance group definitions.</td>
</tr>
</tbody>
</table>
Security considerations

Product-level and command-level security are available for OMEGAMON II. You must implement both types of security, however you can mix security choices at the product level and command level. For example, you can use RACF at the product level and internal OMEGAMON for MVS security at the command level.

For information about the types of security packages available see “Implementing Your Security Configuration” on page 41.

Considerations for End-to-End (ETE)

All of the OMEGAMON products that use ETE V500, can run on one ETE system. For each OMEGAMON that uses ETE, the ETE proc is installed into your PROCLIB during CICAT configuration.

Candle recommends that all your OMEGAMONs share the same ETE started task.

If some OMEGAMON systems require ETE V500 and some require an ETE release prior to Version 160, you will need to run two ETE systems.

See the End-to-End™ Response Time Feature Reference Manual for more information on ETE.
Japanese language support

A single address space can support Japanese as well as US English.

If you want to use OMEGAMON II for MVS in Japanese, you must have specified National Language Support when you defined the Runtime Environment (RTE) using CICAT.

To access OMEGAMON II for MVS, you must specify the Japanese applid using 3270 emulator software that supports Japanese. (Japanese uses the EBCDIC double byte character set.)

If you are using 3270 emulator software, you must also configure the software with the correct settings. If the settings are not correct, the characters are not displayed correctly. If your software displays:

- SBCD code pages, select the code page for 1027
- CCSIDs, select CCSID 939

If these settings are not available in the configuration for your software or the characters are not being displayed correctly, contact the vendor for your software.
Overview of the Process

This section provides a broad overview of the installation, configuration, and customization process. It also includes information about accessing help when using CICAT.

Broad overview of the process

The following table contains the broad steps you follow when you install, configure, and customize OMEGAMON II for MVS. The table also shows where you can find the information you will need during each of the steps.

Table 3. Overview of the Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Using CICAT, install the product and create any new runtime environments.</td>
<td>Installing Candle Products and Candle Management Server on MVS and the online help for the product panel you are using</td>
</tr>
<tr>
<td>2</td>
<td>Using CICAT, configure the components you want to use.</td>
<td>Online help for the product panel you are using</td>
</tr>
<tr>
<td>4</td>
<td>Manually configure the components and verify that the configuration is complete.</td>
<td>Chapters 3—10 in this guide</td>
</tr>
<tr>
<td>5</td>
<td>Manually customize the components you want to use.</td>
<td>Chapters 11—22 in this guide</td>
</tr>
</tbody>
</table>
Getting Help with CICAT

The help for CICAT contains detailed information about using the CICAT panels. For example, the help contains information about:

- how to use the panel
- why parameters are required
- what the available action codes provide
- what the input fields mean
- what you are required to supply

To display help from any CICAT panel, press the Help key (F1) or enter `HELP` on the command line.

You can also display help for the help. For example, you can display information about the command to use to return to the previous topic in the help system. To display the help for help from any help panel, press the Help key (F1) or enter `HELP` on the command line.
CICAT Background and Requirements

This section describes using the Candle Installation and Configuration Assistance Tool (CICAT).

You must use CICAT to install and configure OMEGAMON II for MVS. CICAT is an ISPF dialog that guides you through the installation and configuration steps required to install this product. Data entry panels assist you in understanding your site-specific parameter values. Associated help panels assist you in understanding the CICAT process and describe the input fields on the entry panels.

CICAT is restartable. If necessary, you can end the dialog, start it again, and continue from the point of interruption. ISPF V2.3 or above is required to use CICAT.

If you have not previously installed CICAT during installation of this or any other Candle product, you must do so now. For instructions on installing CICAT, see the Installing Candle Products manual. If you want to use CICAT from a previous installation, you must ensure that it is the most current version of CICAT. The Installing Candle Products and Candle Management Server on MVS manual will help you make this determination.

Restrictions on specifying values in CICAT

Important Note: Entering ampersand (&) in any CICAT parameter string, whether you are in interactive or batch mode, results in a CICAT abend.

Reminder about the information available

If you need information about installing OMEGAMON II for MVS using CICAT, you can locate information in the

- Installing Candle Products and Candle Management Server on MVS manual
- online help for the product panel you are using

Examples of the tasks performed by CICAT

CICAT performs tasks that make OMEGAMON II for MVS operational with a basic set of defaults. You use CICAT to:

- modify JCL
- allocate datasets and historical datastores
- define VTAM applids
- modify OMEGAMON interface security command
- create runtime libraries
- register with a CMS
- specify a security package
- install the Candle Subsystem
CICAT Configuration Procedures

This section describes the CICAT configuration procedures for OMEGAMON II for MVS.

Prerequisites for configuring OMEGAMON II for MVS

Before you start to configure OMEGAMON II for MVS, be sure that you have reviewed the considerations and planning information in the section “Configuration Planning and Considerations” on page 27.

Note: Before you configure OMEGAMON II for MVS, configuration for the CMS should be completed.

The following configuration procedures assume that you have completed SMP/E installation and applied maintenance for OMEGAMON II for MVS as described in your Installing Candle Products and Candle Management Server on MVS manual.

Reminder about the information available

If you need information about configuring OMEGAMON II for MVS using CICAT or specific information about the values you specify using CICAT, see the online help for the product panel you are using.

Hints for a simpler configuration

Following are some hints for a simpler configuration:

- PDSEs (partitioned data set extended) are not supported for the following OMEGAMON II datasets:
  - rhilev.midlev.RKANHENU
  - rhilev.midlev.RKANMOD
  - rhilev.midlev.RKANMODL
  - rhilev.midlev.RKANPENU
  - rhilev.midlev.RKOBHELP

- If target libraries are being used, PDSEs are not supported for the following OMEGAMON II datasets:
  - rhilev.midlev.TKANHENU
  - rhilev.midlev.TKANMOD
  - rhilev.midlev.TKANMODL
  - rhilev.midlev.TKANPENU
  - rhilev.midlev.TKOBHELP
- Configure members in runtime libraries only; future maintenance APPLY jobs can overlay your customized elements if those elements reside in target libraries.

- During the initial product installation (which includes maintenance), you can ignore SMP/E HOLD instructions that address runtime library updates; runtime libraries will automatically contain all changes from the cumulative maintenance and PSP tapes.

- See *Installing Candle Products and Candle Management Server on MVS* for information on replication.
Accessing the Configure OMEGAMON II for MVS menu in CICAT

There are two versions of CICAT available to install and configure Candle products. These include:

- CICAT Version 200
- CICAT Version 300

The method you use to access the Configure OMEGAMON II for MVS Menu in CICAT will vary depending on the version of CICAT you are using.

Accessing the menu in CICAT Version 200

To begin OMEGAMON II for MVS configuration:

1. Start CICAT. (For a reminder, see your Installing Candle Products and Candle Management Server on MVS manual.)
2. On the CICAT Main Menu:
   - If you installed the MultiProduct Quick Install tape, select MultiProduct Quick Install.
     
To preview the list of products included in your MultiProduct Quick Install tape, you can use action code V (View Additional Information) on MultiProduct Quick Install.

   - If you installed OMEGAMON II for MVS as a separate product, select it.
3. On the Installation/Configuration Primary Menu, select Assist Configuration.
4. On the Runtime Environments panel, use action code C (Configure) on the RTE you are ready to configure.
5. If you installed the MultiProduct Quick Install tape or a multicomponent product, select OMEGAMON II for MVS on the Product Configuration Selection Menu.
6. Proceed to use the Configure OMEGAMON II for MVS Menu.

Accessing the menu in CICAT Version 300

To begin OMEGAMON II for MVS configuration:

1. Start CICAT. (For a reminder, see your Installing Candle Products and Candle Management Server on MVS manual.)
2. On the Main Menu, select Configure products.
3. On the Configure Products menu, select Setup configuration environment.
4. On the Setup Configuration Environment panel, specify the values.
5. Return to the Configure Products menu.
   Result: CICAT displays the Product Selection menu.
7. On the Product Selection menu, select OMEGAMON II for MVS.
   Result: CICAT displays the Configure OMEGAMON II for MVS Menu.
Example of the Configure OMEGAMON II for MVS menu in CICAT

The following figure is an example of the Configure OMEGAMON II for MVS menu.

FIGURE 1. Example of the Configure OMEGAMON II for MVS Menu in CICAT

```
----------- CONFIGURE OMEGAMON II FOR MVS / RTE: RTE NAME----------
OPTION ===>

Perform these configuration steps in order: Date Time
1 Specify configuration values
2 Allocate historical datastores
3 Create runtime members
4 Modify Classic interface command security
5 Register with local CMS
6 Install Candle Subsystem
7 Complete the configuration

Optional:
8 Update APF list information
9 Configure JES2 interface
10 Run migration utility

F1=Help  F3=Back
```

CICAT configuration checklist

The following table contains the steps you perform on the CICAT Configure OMEGAMON II for MVS menu. The steps are listed in the sequence in which they are to be performed. Use the ✔ column to check off steps as you complete them.

**Table 4. CICAT Configuration Procedure Checklist**

<table>
<thead>
<tr>
<th>✔</th>
<th>CICAT Configuration Procedure Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use <strong>Specify configuration values</strong> to specify the started task names, VTAM major node, and applids for the OMEGAMON II for MVS realtime and historical components.</td>
</tr>
<tr>
<td></td>
<td>Use <strong>Specify historical datastore allocation</strong> to specify the dataset names for the new historical VSAM clusters. <strong>Note:</strong> If you are migrating from a prior version of OMEGAMON II for MVS and plan to use existing datastores, leave this panel blank.</td>
</tr>
<tr>
<td></td>
<td>Use <strong>Create runtime members</strong> to submit the JCL to create values and tables for your RTE.</td>
</tr>
<tr>
<td></td>
<td>Use <strong>Modify Classic interface command security</strong> to customize the security exit, and to install security information into each runtime environment that requires OMEGAMON interface security.</td>
</tr>
<tr>
<td></td>
<td>Use <strong>Register with local CMS</strong> to install CMS parameter files and OMEGAMON II for MVS data</td>
</tr>
<tr>
<td></td>
<td>If you want to install a Candle subsystem, specify the values using <strong>Install Candle Subsystem</strong>. (This step is not required if you performed the step when you installed another product.)</td>
</tr>
</tbody>
</table>
When to load the runtime libraries

You use action code L (Load Libs after SMP/E) on the Runtime Environments (RTEs) panel to populate the load libraries for a selected RTE. This action code upgrades your RTE to the latest Candle maintenance level. Use action code L at the following points in the CICAT process.

- After you install and configure the products you want in a new RTE.
- After you install and configure an additional product into an existing RTE.
- After you apply additional Candle maintenance.

When you defined or updated your RTE, you had the option to selectively load from the target to the runtime libraries only those members that changed.

If you requested Load Optimization, the load job generated when you use action code L (Load):

- Copies only modified modules.
- Requires access to IBM's SuperC (ISRSUPC) utility.
- Uses less DASD space.
- Performs additional analysis which uses more CPU and I/O.

If you bypass Load Optimization, the load job:

- Copies all members.
- Requires more DASD space.
- Uses less CPU time.
Manual Configuration Procedures

This section provides information about performing manual configuration procedures for OMEGAMON II for MVS.

Reminder about the information available

The checklist in the following table contains the location where you can find the information you will need.

Manual configuration checklist

The following table contains the steps you perform manually to configure OMEGAMON II for MVS. The steps are listed in the sequence in which they are to be performed. Use the ✔ column to check off steps as you complete them.

<table>
<thead>
<tr>
<th>✔</th>
<th>Manual Configuration Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>Implement OMEGAMON II product external security using “Implementing Your Security Configuration” on page 41.</td>
</tr>
<tr>
<td></td>
<td>Configure the CSA analyzer using “Configuring the CSA Analyzer” on page 73.</td>
</tr>
<tr>
<td></td>
<td>Copy the VTAM node from RKANSAM to the IBM VTAM list (VTAMLST) using “Copying VTAM definitions to VTAMLST” on page 64.</td>
</tr>
<tr>
<td></td>
<td>Copy the STCs from RKANSAM to PROCLIB using “Copying STCs to the started task library” on page 64.</td>
</tr>
<tr>
<td></td>
<td>Copy customized profiles/screen spaces into RKOMPFSV and RKOMPCSV using “Copying Customized Profile and Screen Space Datasets” on page 65.</td>
</tr>
<tr>
<td></td>
<td>APF-authorize the RKANMOD, RKANMODD, RKANMOD1, and RKANMODL load libraries using “APF-Authorizing Load Libraries” on page 66.</td>
</tr>
<tr>
<td></td>
<td>Copy the KCNDLINT load module to an APF-authorized LINKLIST library using “Copying KCNDLINT to an APF-authorized LINKLIST Library” on page 67.</td>
</tr>
<tr>
<td></td>
<td>Verify the configuration of OMEGAMON II using “Verifying and Troubleshooting the Configuration” on page 77.</td>
</tr>
<tr>
<td></td>
<td>If you want to configure OMEGAMON II for a dedicated terminal see “Optionally Configuring OMEGAMON II to Run on a Dedicated Terminal” on page 93. (This step is optional.)</td>
</tr>
<tr>
<td></td>
<td>If you want to configure OMEGAMON for different operating modes see “Installing and Running OMEGAMON for MVS in Different Modes” on page 101. (This step is optional.)</td>
</tr>
<tr>
<td></td>
<td>If you want to configure the historical reporter in different modes see “Running the EPILOG Historical Reporter in Different Modes” on page 121. (This step is optional.)</td>
</tr>
</tbody>
</table>
Manual Customization Procedures

This section provides information about performing manual customization procedures for OMEGAMON II for MVS.

Reminder about the information available

The checklist in the following table contains the location where you can find the information you will need.

Manual customization checklist

The following table contains the steps you perform manually to customize OMEGAMON II for MVS. The steps are listed in the sequence in which they are to be performed. Use the ✓ column to check off steps as you complete them. Candle recommends that you review the entire process before you begin customizing OMEGAMON II for MVS.

<table>
<thead>
<tr>
<th>✓</th>
<th>Manual Customization Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>To customize OMEGAMON controls, use “Customizing OMEGAMON Controls” on page 135.</td>
</tr>
<tr>
<td>✓</td>
<td>To customize OMEGAMON II realtime controls, use “Customizing OMEGAMON II Realtime Controls” on page 143.</td>
</tr>
<tr>
<td>✓</td>
<td>To customize historical data collector controls using OMEGAMON II panels, use “Customizing Historical Data Collector Controls Using Panels” on page 157.</td>
</tr>
<tr>
<td>✓</td>
<td>To customize additional historical data collector controls, use “Customizing Historical Data Collector Controls Using a Text Editor” on page 163.</td>
</tr>
<tr>
<td>✓</td>
<td>To set up your environment for the uninterrupted collection of historical data, use “Setting Up the Environment for Uninterrupted Historical Data Collection” on page 181.</td>
</tr>
<tr>
<td>✓</td>
<td>To add or drop an historical datastore or switch to another historical datastore, use “Managing the Environment for Uninterrupted Historical Data Collection” on page 189.</td>
</tr>
<tr>
<td>✓</td>
<td>To maintain the profile datastore, use “Manual Maintenance of the Profile Datastore” on page 209.</td>
</tr>
<tr>
<td>✓</td>
<td>To control access to OMEGAMON II features, use “Controlling Access to Feature within OMEGAMON II” on page 213.</td>
</tr>
</tbody>
</table>
You can control access to OMEGAMON II in a variety of ways. An internal security system (NAM) and interfaces to external security packages (RACF, CA-ACF2, or CA-TOP SECRET) allow you to set up the level of access control required at your site.

In addition to product security features, you can implement other features in external security packages. For example, you can control access to the VTAM logon applid and security audit reports.

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Implementing External Security: RACF .............................. 47
Implementing External Security: CA-ACF2 ......................... 52
Implementing External Security: CA-TOP SECRET ............... 57
Preparing to Implement Security

You can provide OMEGAMON II security using a combination of security types and implementations. The following information will help you understand the different types of security that are available and how you can implement each type.

Types of security

The following types of security are available for OMEGAMON II.

<table>
<thead>
<tr>
<th>Security Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product-level</td>
<td>Provides user ID and password validation to detect and prevent unauthorized access to the OMEGAMON II product, starting with the System Status panel.</td>
</tr>
<tr>
<td>Command-level</td>
<td>Prevents the unauthorized use of sensitive OMEGAMON for MVS commands from OMEGAMON II panels and by OMEGAMON users.</td>
</tr>
</tbody>
</table>

Important implementation note

You must implement both product-level and command-level security. You can mix security choices at the OMEGAMON II product level and the command level using, for example, RACF at the product level and internal OMEGAMON for MVS security at the command level.

Ways to implement security types

You can implement product-level security and command-level security in the following ways.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>This implementation uses the security included with OMEGAMON II to control access at the product level (NAM) and/or the command level.</td>
</tr>
<tr>
<td>External</td>
<td>This implementation uses another security package (RACF, CA-ACF2, or CA-TOP SECRET) to control access at the product level and/or the command level.</td>
</tr>
</tbody>
</table>
Implementing Your Security Configuration

Preparing to Implement Security

High-level overview of steps

Perform the following steps to choose and implement security:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Choose one security implementation at the product level and one security implementation at the command level from Table 7: Product-level Security Choices on page 43 and Table 8: Command-level Security Choices on page 44, respectively.</td>
</tr>
<tr>
<td>2</td>
<td>Implement your product-level security choice by following the instructions provided in the appropriate topic.</td>
</tr>
<tr>
<td>3</td>
<td>Implement your command-level security choice by following the instructions provided in the appropriate topic.</td>
</tr>
</tbody>
</table>

Product-level security choices

The following table describes the product-level security choices and where to find directions for implementing them.

Table 7. Product-level Security Choices

<table>
<thead>
<tr>
<th>Security System</th>
<th>Exit Name, if required</th>
<th>Instructions Provided in Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAM (Internal)</td>
<td>None</td>
<td>“NAM internal product-level security” on page 45</td>
</tr>
<tr>
<td>RACF (External)</td>
<td>None</td>
<td>“RACF: product-level (OMEGAMON II for MVS) security” on page 47</td>
</tr>
<tr>
<td>CA-ACF2 (External)</td>
<td>KLVA2NEV</td>
<td>“CA-ACF2: product-level (OMEGAMON II for MVS) security” on page 52</td>
</tr>
<tr>
<td>CA-TOP SECRET (External)</td>
<td>KLVTSNEV</td>
<td>“CA-TOP SECRET: product-level (OMEGAMON II for MVS) security” on page 57</td>
</tr>
</tbody>
</table>

Note: If external security has been used for the Candle Management Server, then you must select external security for OMEGAMON II.
**Command-level security choices**

The following table describes the command-level security choices and where to find directions for implementing them.

### Table 8. Command-level Security Choices

<table>
<thead>
<tr>
<th>✓</th>
<th>Security System</th>
<th>Exit Name (If Required)</th>
<th>Instructions Provided in Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OMEGAMON (Internal)</td>
<td>None</td>
<td>“OMEGAMON internal command-level security” on page 46.</td>
</tr>
<tr>
<td></td>
<td>RACF (External)</td>
<td>KOMRACFX</td>
<td>“RACF: command-level (OMEGAMON for MVS) security” on page 47</td>
</tr>
<tr>
<td></td>
<td>CA-ACF2 (External)</td>
<td>KOMACF2X</td>
<td>“CA-ACF2: command-level (OMEGAMON for MVS) security” on page 53</td>
</tr>
<tr>
<td></td>
<td>CA-TOP SECRET (External)</td>
<td>KOMRACFX</td>
<td>“CA-TOP SECRET: command-level (OMEGAMON for MVS) security” on page 58</td>
</tr>
</tbody>
</table>

### If command-level security is not implemented

If you attempt to start OMEGAMON II without activating command-level security (by running job KOMSUPD), the following message will be issued to the MVS operator console, and the realtime collector will not start:

**OM0906: COMMAND-LEVEL SECURITY NOT INSTALLED.**

**PLEASE RUN JOB KOMSUPD IN rhilev.midlev.RKANSAM.**

**FOR MORE INFORMATION, REFER TO THE DOCUMENTATION ABOUT ACTIVATING COMMAND LEVEL SECURITY.**

You must perform one of the procedures described in “Command-level security choices” on page 44 to activate command-level security.
Implementing Internal Security: NAM

This topic describes how to set up the internal security provided with OMEGAMON II.

NAM internal product-level security

The OMEGAMON II Network Access Manager (NAM) can serve as a standalone security system at the product level. NAM provides user ID and password validation to detect and prevent unauthorized access to the OMEGAMON II product, starting with the System Status panel. Follow these steps to implement NAM security:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | When the CICAT configuration was done, if you selected NAM security, this step was completed automatically. Modify the security definition in `rhilev.midlev.RKANPAR(KM2INNAM)` as follows:  
  ```
  DEFAULT DSNAME(rhilev.RKM2NAM) NORACF
  ``` |
| 2    | Start the OMEGAMON II started task from the MVS console as follows:  
  ```
  S cccccccc
  ```  
  where `ccccccc` is the started task name you specified for OMEGAMON II for MVS using CICAT. |
| 3    | Define all authorized OMEGAMON II users to NAM (remember to authorize your own user ID and password). Issue the MODIFY command from the MVS console as follows:  
  ```
  F cccccccc,NAM SET userid PASSWORD=password1
  ```  
  where `ccccccc` is the started task name you specified for OMEGAMON II for MVS using CICAT. |
| 4    | Log onto OMEGAMON II using a user ID and password that has been defined to NAM. The password that was set in the MVS MODIFY command will expire the first time you log on. At that time, you must enter a new password.  
  **Note:** You must complete the steps in “OMEGAMON internal command-level security” on page 46 before attempting to log onto OMEGAMON II.  
  NAM maintains a record of the previous eight passwords for each user. New passwords cannot match any of the eight listed. |
| 5    | After implementing NAM security, maintain user IDs and passwords as follows:  
  To modify a user password, reissue the MODIFY command you used to initially set the password.  
  - To control the number of times a user can log on before a change of password is required, issue the MODIFY command from the MVS console as follows:  
    ```
    F cccccccc,NAM SET userid EXPIRE=nn
    ```  
    where `ccccccc` is the started task name you specified for OMEGAMON II for MVS using CICAT.  
    The default is 0 (no expiration).  
  - To delete a NAM user, enter the following command:  
    ```
    F cccccccc,NAM DELETE userid
    ```  
    where `ccccccc` is the started task name you specified for OMEGAMON II for MVS using CICAT. |
OMEGAMON internal command-level security

OMEGAMON command-level security prevents the unauthorized use of sensitive OMEGAMON for MVS commands. All commands are assigned a security level of 0, 1, 2, or 3. Commands may also be disabled, so that no one can use them. Users who know the password assigned to a level can access all commands in that level, as well as commands in lower levels. Each security level must have its own unique password.

Candle ships all authorized commands with a default security level of 3, and all others with a level of 0 (level 0 commands can be issued by all users and do not require passwords). You can change the security level of any OMEGAMON command to suit the needs of your installation.

To implement OMEGAMON internal command-level security, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit the control statements in the KOMSUPDI member of rhilev.midlev.RKANPAR. “Command-level Security Control Statements” on page 225 describes these control statements. Add the LIST=YES statement to create a complete listing of security information. <strong>Note:</strong> If you are switching from external command-level security (RACF, CA-ACF2, or CA-TOP SECRET) to internal command-level security, you must do the following: 1. Add the RESET=MODULE command after your existing MODULE=xxxxxxxx command. 2. Change commands marked EXTERNAL=YES to EXTERNAL=NO.</td>
</tr>
<tr>
<td>2</td>
<td>Modify and submit job KOMSUPD in rhilev.midlev.RKANSAM to update and report on the security table (see “Security Update Program Listing” on page 233). If the update program flags statements as being in error, correct the statements and re-submit job KOMSUPD.</td>
</tr>
<tr>
<td>3</td>
<td>If OMEGAMON is currently active, recycle OMEGAMON. Changes made to the security table are effective only when OMEGAMON has been started after the security update job completes successfully.</td>
</tr>
</tbody>
</table>

Changing your security level to issue authorized commands

In order to issue an authorized command, your session security level must be equal to (or greater than) the level defined in the security table for that command. You can change your security level as follows:

- From an OMEGAMON II session, select Options/Controls/Set Realtime Command-Level Password to display the password entry pop-up.
  
  OR

- From an OMEGAMON session, enter the /PWD command.
Implementing External Security: RACF

This topic describes how to interface with the RACF external security system. RACF can be implemented at the product level (to prevent unauthorized access of OMEGAMON II), the command level (to prevent unauthorized use of sensitive OMEGAMON commands), or both.

RACF: authorizations for OMEGAMON II

In order to use the OMEGAMON II replace link list datasets function on systems prior to OS/390 Release 3, OMEGAMON II must be:

- authorized to issue the MVS START and STOP commands.
- given READ authority to SYS1.PARMLIB.

RACF: product-level (OMEGAMON II for MVS) security

Follow these steps to interface with RACF security at the product level:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grant RACF CONTROL authority to the user ID for the started task for OMEGAMON II for MVS for the VSAM files rvhilev.RKM2NAM, rvhilev.RKM2TDB, and rvhilev.RKM2VLOG, so that it can update, insert, delete, and retrieve information from these files. This example shows how to enter the PERMIT commands:</td>
</tr>
<tr>
<td></td>
<td>PERMIT ‘rvhilev.RKM2NAM’ ACCESS(CONTROL) WHEN(PROGRAM(KLV)) ID(*) GENERIC</td>
</tr>
<tr>
<td></td>
<td>PERMIT ‘rvhilev.RKM2TDB’ ACCESS(CONTROL) WHEN(PROGRAM(KLV)) ID(*) GENERIC</td>
</tr>
<tr>
<td></td>
<td>PERMIT ‘rvhilev.RKM2VLOG’ ACCESS(CONTROL) WHEN(PROGRAM(KLV)) ID(*) GENERIC</td>
</tr>
<tr>
<td>2</td>
<td>When the CICAT configuration was done, if you selected RACF security, this step was completed automatically. Modify the security definition in rhilev.midlev.RKANPAR(KM2INNAM) as follows:</td>
</tr>
<tr>
<td></td>
<td>DEFAULT DSNAME(rvhilev.NAM) RACF NODB</td>
</tr>
</tbody>
</table>

Note: Keywords cannot extend past column 72. To continue keyword parameters on separate lines, end each line with a space and a hyphen.

RACF: command-level (OMEGAMON for MVS) security

At the command level, you can use RACF security for both:

- OMEGAMON for MVS logon validation (this includes the OMEGAMON II internal logon to OMEGAMON). Users can log on to an OMEGAMON session only if they are allowed access to an “INITIALx” resource name (where x is 0, 1, 2, 3, or blank).
- Command validation. You can also use a combination of both RACF and OMEGAMON internal security for command validation.
Implementing External Security: RACF

To implement RACF command-level security, you need to do the following (detailed instructions for each of these is provided later in this topic):

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up rules in the external security package to interface with OMEGAMON.</td>
</tr>
<tr>
<td>2</td>
<td>Customize, assemble, and link the sample exit routine.</td>
</tr>
<tr>
<td>3</td>
<td>Modify and update the security table to specify the commands you want RACF to validate.</td>
</tr>
</tbody>
</table>

### RACF: setting up rules

To set up RACF rules to interface with OMEGAMON, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Update the resource class description table to define a class name (for example, OMCANDLE) using the ICHERCDE macro call. If you do not use class name OMCANDLE, you will have to change the security exit class name to match your new class name (details are provided in the next topic). We recommend coding the ICHERCDE macro as follows:  

   ICHERCDE CLASS=classnme,  
   ID=nnn,  
   MAXLNTH=8,  
   FIRST=ALPHANUM,  
   OTHER=ANY,  
   POSIT=nnn,  
   DFTUACC=NONE  

   Your configuration determines values for classnme and nnn. Your installation may also require additional operands for this macro. |
| 2    | Activate the newly defined resource class. |
| 3    | Define an INITIALx (where x is 0, 1, 2, 3, or blank) resource profile for logging onto OMEGAMON. For example:  

   RDEFINE classnme INITIAL UACC(READ)  

   The resource name “INITIAL” permits users to change their security level with the /PWD command.  

   Resource names “INITIAL0” through “INITIAL3” lock a user to the highest matching security level (0, 1, 2, or 3) and prevent that user from changing their level with the /PWD command (this is also referred to as locking). These security levels are used with OMEGAMON internal security to determine if a particular command is accessible to a user.  

   This example shows resource definitions to set a user to security level 2 (first define security level 0, 1, 2, and 3 as unaccessible, and then set USER02 to security level 2):  

   RDEFINE classnme INITIAL0 UACC(NONE)  
   RDEFINE classnme INITIAL1 UACC(NONE)  
   RDEFINE classnme INITIAL2 UACC(NONE)  
   RDEFINE classnme INITIAL3 UACC(NONE)  
   PERMIT INITIAL2 CLASS(classnme) ID(USER02) ACC(READ) |
Implementing External Security: RACF

RACF: setting up exit

Follow these steps to set up the exit that interfaces with RACF:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit and modify the exit <code>rhilev.midlev.RKANSAM(KOMRACFX)</code>. Be sure that the resource class name in the exit matches the resource class name you defined when setting up RACF rules. The class name in the exit (default is OMCANDLE) is defined on this instruction (line 90): <code>MVC U#CHCLSD,=C'OMCANDLE'</code> ALTERNATE RESOURCE CLASS NAME The processing logic for this exit is provided in “Command-Level Security Exit Processing Logic” on page 221. Many sites use this exit without modification, but it is documented with comments to facilitate changes.</td>
</tr>
<tr>
<td>2</td>
<td>Assemble and link the exit routine. Use sample job <code>rhilev.midlev.RKANSAM(KOMRACFA)</code>.</td>
</tr>
</tbody>
</table>
RACF: setting up security table

To set up the security table, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1 | Edit the control statements in the KOMSUPDI member of rhilev.midlev.RKANPAR. “Command-level Security Control Statements” on page 225 describes these control statements.  
1. Uncomment the MODULE command statement, and enter the name of the exit KOMRACFX on the MODULE statement as follows:  
   `MODULE=KOMRACFX`  
2. Indicate which commands are to be validated by RACF rules by setting `EXTERNAL=YES` on the COMMAND control statements.  
3. Indicate which commands are to be validated by OMEGAMON internal security levels by setting `LEVEL=n` and `EXTERNAL=NO` on the COMMAND control statements.  
   **Important:** To change an existing setting for a parameter, you must specify a new setting, rather than just blanking out the old setting. For example, to remove a command from external security checking, change `EXTERNAL=YES` to `EXTERNAL=NO`. |
| 2 | Modify and submit job KOMSUPD in rhilev.midlev.RKANSAM to update and report on the security table (see “Security Update Program Listing” on page 233). If the update program flags statements as being in error, correct the statements and re-submit job KOMSUPD. |
| 3 | If OMEGAMON (default name CANSM2RC) is currently active, recycle OMEGAMON. Changes made to the security table are effective only when OMEGAMON has been started after the security update job completes successfully. |

RACF: protecting the OMEGAMON II VTAM applid

Perform the following steps to protect the OMEGAMON II applid:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1 | Create the following profile in the APPL class:  
   `RDEFINE APPL cccccccc UACC(NONE)`  
   where cccccccc is the started task name you specified for OMEGAMON II for MVS using CICAT. |
| 2 | Allocate READ access to the profile as follows:  
   `PERMIT cccccccc CLASS(APPL) ID(userid) ACCESS(READ)`  
   where cccccccc is the started task name you specified for OMEGAMON II for MVS using CICAT. |
| 3 | Activate the APPL class as follows:  
   `SETROPTS CLASSACT(APPL)` |
RACF: protecting the OMEGAMON II for MVS datasets

In order to control access and unauthorized usage of OMEGAMON II programs, we recommend that you set:

- universal access of none to all OMEGAMON II datasets.
- access of read to all OMEGAMON II load libraries for OMEGAMON II started tasks and TSO users using OMEGAMON for MVS. Note that access needs to be read and not execute, because the modules are loaded into storage and then executed.
- access of alter for the OMEGAMON II customizer to all OMEGAMON II datasets.
Implementing External Security: CA-ACF2

This topic describes how to interface with the CA-ACF2 external security system. You can implement CA-ACF2 at the product level (to prevent unauthorized access of OMEGAMON II), the command level (to prevent unauthorized use of sensitive OMEGAMON commands), or both.

CA-ACF2: authorizations for OMEGAMON II for MVS

In order to use the OMEGAMON II replace link list datasets function on systems prior to OS/390 Release 3, OMEGAMON II must be:
- authorized to issue the MVS START and STOP commands.
- given READ authority to SYS1.PARMLIB.

CA-ACF2: product-level (OMEGAMON II for MVS) security

Follow these steps to interface with CA-ACF2 security validation at the product level:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grant CA-ACF2 authority to the user ID for the OMEGAMON II for MVS started task for the VSAM files rvhilev.RKM2NAM, rvhilev.RKM2TDB, and rvhilev.RKM2VLOG, so that it can update, insert, delete, and retrieve information from these files. This example shows how to enter the CA-ACF2 rules:</td>
</tr>
<tr>
<td></td>
<td>$KEY(first-level qualifier of rvhilev) [remaining qualifiers of rvhilev.] RKM2NAM UID(*) PGM(KLV-) R(A) W(A)</td>
</tr>
<tr>
<td></td>
<td>[remaining qualifiers of rvhilev.] RKM2TDB UID(*) PGM(KLV-) R(A) W(A)</td>
</tr>
<tr>
<td></td>
<td>[remaining qualifiers of rvhilev.] RKM2VLOG UID(*) PGM(KLV-) R(A) W(A)</td>
</tr>
<tr>
<td>2</td>
<td>When the CICAT configuration was done, if you selected CA-ACF2 security, this step was completed automatically. Modify the security definition in rhilev.midlev.RKANPAR(KM2INNAM) as follows:</td>
</tr>
<tr>
<td></td>
<td>DEFAULT DSNAME(rvhilev.RKM2NAM) EXIT=KLVA2NEV NORACF NODB</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Keywords cannot extend past column 72. To continue on separate lines, end each line with a space and a hyphen. For example:</td>
</tr>
<tr>
<td></td>
<td>DEFAULT DSNAME(rvhilev.RKM2NAM) - EXIT=KLVA2NEV - NORACF - NODB</td>
</tr>
<tr>
<td>3</td>
<td>The exit for ACF2 security validation, KLVA2NEV, was previously assembled and linked into rhilev.midlev.RKANMOD during CICAT Configuration for OMEGAMON II for MVS.</td>
</tr>
</tbody>
</table>
Implementing Your Security Configuration

CA-ACF2: command-level (OMEGAMON for MVS) security

At the command level, you can use CA-ACF2 security for both:

- OMEGAMON for MVS logon validation (this includes the OMEGAMON II internal log on to OMEGAMON). Users can log on to an OMEGAMON session only if they are allowed access to an “INITIALx” resource name (where x is 0, 1, 2, 3, or blank).
- Command validation. You can also use a combination of both CA-ACF2 and OMEGAMON internal security for command validation.

To implement CA-ACF2 command-level security, you need to do the following (detailed instructions for each of these are provided later in this topic):

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up rules in the external security package to interface with OMEGAMON.</td>
</tr>
<tr>
<td>2</td>
<td>Customize, assemble, and link the sample exit routine.</td>
</tr>
<tr>
<td>3</td>
<td>Modify and update the security table to specify the commands you want CA-ACF2 to validate.</td>
</tr>
</tbody>
</table>

CA-ACF2: command-level (OMEGAMON for MVS) security

The multiuser system access control point used by OMEGAMON II has all the characteristics of a CA-ACF2 Multiple User Single Address Space System (MUSASS). System access validations are initiated and enforced by the address space on behalf of the network user.

Define OMEGAMON II as a MUSASS to CA-ACF2. Follow this sequence from the TSO READY prompt:

When you see this: Type this and press Enter:

READY ACF
ACF SET LID
LID CH cccccccc MUSASS
(where cccccccc is the started task name you specified for OMEGAMON II for MVS using CICAT)
LID END
**CA-ACF2: setting up rules**

To set up CA-ACF2 rules to interface with OMEGAMON, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Define the name of the OMEGAMON started task to ACF2. The name is the started task name you specified for the realtime collector using CICAT. The started task name must have the MUSASS attribute assigned. This allows ACF2 to check the individual user’s authorization rather than using the OMEGAMON address space ID.</td>
</tr>
<tr>
<td>2</td>
<td>Set up a resource class in CA-ACF2 to allow OMEGAMON to make the security checks. Define a generalized resource class name, for example OMS. This name will be three characters long for generalized resources. When you set up the exit, you will need to use this same class name prefixed with the letter R (for example, OMS class name needs to be ROMS in the exit).</td>
</tr>
</tbody>
</table>
| 3    | Define a CA-ACF2 rule for resource INITIALx (where x is 0, 1, 2, 3, or blank) to allow users to log on to OMEGAMON. For example,  

   ACFNRULE KEY(INITIAL) TYPE(OMS) ADD(UID(********userid) ALLOW)

   where OMS must match the resource class name that you defined, and uid is a user ID or user ID mask. 

   The resource name “INITIAL” permits users to change their security level with the /PWD command. Resource names “INITIAL0” through “INITIAL3” lock a user to the highest matching security level (0, 1, 2, or 3) and prevent that user from changing their level with the /PWD command (this is also referred to as locking). These security levels are used with OMEGAMON internal security to determine if a particular command is accessible to a user. The following example shows how to set users to specific levels:  

   ACFNRULE KEY(INITIAL0) TYPE(OMS) ADD(UID(********USER02) ALLOW)  
   ACFNRULE KEY(INITIAL1) TYPE(OMS) ADD(UID(********USER03) ALLOW)  
   ACFNRULE KEY(INITIAL2) TYPE(OMS) ADD(UID(********USER04) ALLOW)  
   ACFNRULE KEY(INITIAL3) TYPE(OMS) ADD(UID(********USER05) ALLOW) 

| 4    | Set up a CA-ACF2 rule for each command you want to protect with CA-ACF2 (each protected command will also require the EXTERNAL=YES setting in the security table). The following example shows how to authorize a user to execute the PEEK command (specify the command name with the KEY operand):  

   ACFNRULE KEY(PEEK) TYPE(OMS) ADD(UID(********USER01) ALLOW) 

   If the command you want to secure begins with a slash (/) or period (.), the CA-ACF2 rule you define must start with a dollar sign ($) instead of the slash (/), or an at sign (@) instead of the period (.). For example, the command /LOGOUT requires a rule for $LOGOUT. |
CA-ACF2: setting up exit

Follow these steps to set up the exit that interfaces with CA-ACF2:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit and modify the exit `rhilev.midlev.RKANSAM(KOMACF2X)`.  
      | Be sure that the resource class you set up in the exit has the same name as the ACF2 resource class you defined, and that it is prefixed with the letter `R` (for example, OMS class name needs to be ROMS in the exit).  
      | The processing logic for this exit is provided in “Command-Level Security Exit Processing Logic” on page 221. Many sites use this exit without modification. |
| 2    | Assemble and link the exit routine. Use sample job `rhilev.midlev.RKANSAM(KOMACF2A)`.

CA-ACF2: setting up security table

To set up the security table, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit the control statements in the KOMSUPDI member of `rhilev.midlev.RKANPAR`.  
      | “Command-level Security Control Statements” on page 225 describes these control statements.  
      | 1. Uncomment the MODULE command statement, and enter the name of the exit KOMACF2X on the MODULE statement as follows:  
      | `MODULE=KOMACF2X`  
      | 2. Indicate which commands are to be validated by CA-ACF2 rules by setting EXTERNAL=YES on the COMMAND control statements.  
      | 3. Indicate which commands are to be validated by OMEGAMON internal security levels by setting LEVEL=n and EXTERNAL=NO on the COMMAND control statements.  
      | **Important:** To change an existing setting for a parameter, you must specify a new setting, rather than just blanking out the old setting. For example, to remove a command from external security checking, change `EXTERNAL=YES` to `EXTERNAL=NO`.

2 | Modify and submit job KOMSUPD in `rhilev.midlev.RKANSAM` to update and report on the security table (see “Security Update Program Listing” on page 233). If the update program flags statements as being in error, correct the statements and re-submit job KOMSUPD.

3 | If OMEGAMON (default name CANM2RCL) is currently active, recycle OMEGAMON. Changes made to the security table are effective only when OMEGAMON has been started after the security update job completes successfully.

CA-ACF2: protecting the OMEGAMON II for MVS datasets

In order to control access and unauthorized usage of OMEGAMON II programs, we recommend that you set:

- universal access of none to all OMEGAMON II datasets.
- access of read to all OMEGAMON II load libraries for OMEGAMON II started tasks and TSO users using OMEGAMON for MVS. Note that access needs to be read and not execute, because the modules are loaded into storage and then executed.
- access of alter for the OMEGAMON II customizer to all OMEGAMON II datasets.
Implementing External Security: CA-TOP SECRET

This topic describes how to interface with the CA-TOP SECRET external security system. You can implement CA-TOP SECRET at the product level (to prevent unauthorized access of OMEGAMON II), the command level (to prevent unauthorized use of sensitive OMEGAMON commands), or both.

CA-TOP SECRET: authorizations for OMEGAMON II for MVS

In order to use the OMEGAMON II replace link list datasets function on systems prior to OS/390 Release 3, OMEGAMON II must be:

- authorized to issue the MVS START and STOP commands.
- given READ authority to SYS1.PARMLIB.

CA-TOP SECRET: product-level (OMEGAMON II for MVS) security

Follow these steps to interface with CA-TOP SECRET external security at the product level:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1 | When the CICAT configuration was done, if you selected CA-TOP SECRET security, this step was completed automatically. Modify the security definition in rhilev.midlev..RKANPAR(KM2INNAM) as follows:<br><br>```plaintext
DEFAULT DSNAME(rhilev.RKM2NAM) EXIT=KLVTSNEV RACF NODB
```
**Note:** Keywords cannot extend past column 72. To continue keyword parameters on separate lines, end each line with a space and a hyphen. For example enter:<br><br>```plaintext
DEFAULT DSNAME(rhilev.RKM2NAM) -
EXIT=KLVTSNEV -
RACF -
NODB
```
| 2 | Configure the exit for security validation. Member rhilev.RKANSAM(KLVTSNEV) mis the sample interface to CA-TOP SECRET. This sample can be used as is or modified to fit the needs of your site. Assemble and link KLVTSNEV with AC=1 into the rhilev.midlev.RKANMODL library. Member rhilev.RKANSAM(KLV@ASM) contains assembly JCL that you can modify according to instructions in the member. |
| 3 | Define the OMEGAMON II address space as a started task in the STC record, along with the related master FACILITY ACID. For example, enter:<br><br>```plaintext
TSS ADD(STC) PROC(ccccccccc) ACID(master facility acid)
```
where cccccccc is the started task name you specified for OMEGAMON II for MVS using CICAT.
**Implementing External Security: CA-TOP SECRET**

**OMEGAMON II for MVS Configuration and Customization Guide, Version 520**

At the command level, you can use CA-TOP SECRET security for both:

- OMEGAMON for MVS logon validation (this includes the OMEGAMON II internal logon to OMEGAMON). Users can log on to an OMEGAMON session only if they are allowed access to an "INITIALx" resource name (where x is 0, 1, 2, 3, or blank).

- Command validation. You can also use a combination of both CA-TOP SECRET and OMEGAMON internal security for command validation.

To implement CA-TOP SECRET command-level security, you need to do the following (detailed instructions for each of these is provided later in this chapter):

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 4    | Define task as a FACILITY in the Facility Matrix Table, where task is the started task name. If the name you define in the FACILITY statement is different from the started task name, see the CA-TOP SECRET documentation for information on setting up the FACILITY statement. The following example shows FACILITY statements from a CA-TOP SECRET installation (some of these statements may not be relevant to your system, and others may need modification):  
  FACILITY(USER3=NAME=task)  
  FACILITY(task=MODE=FAIL,ACTIVE,SHRPRF)  
  FACILITY(task=PGM=KLV,NOASUBM,NOABEND,NOXDEF)  
  FACILITY(task=ID=3,MULTIUSER,RES,WARNPW,SIGN(M))  
  FACILITY(task=NOINSTDATA,NORNDPW,AUTHINIT,NOPROMPT,NOAUDIT)  
  FACILITY(task=NOTSOC,LOG(INIT,SMF,MSG,SEC9))  
  **Important:** The SIGN parameter on the FACILITY statement must be specified as SIGN(M), or TOP SECRET may revoke user access. Also, verify that MODE=FAIL is set. |
| 5    | (Optional) Define all the OMEGAMON II datasets you want protected to CA-TOP SECRET. Make sure the OMEGAMON II started task has access to them. |

**CA-TOP SECRET: command-level (OMEGAMON for MVS) security**

At the command level, you can use CA-TOP SECRET security for both:

- OMEGAMON for MVS logon validation (this includes the OMEGAMON II internal logon to OMEGAMON). Users can log on to an OMEGAMON session only if they are allowed access to an “INITIALx” resource name (where x is 0, 1, 2, 3, or blank).

- Command validation. You can also use a combination of both CA-TOP SECRET and OMEGAMON internal security for command validation.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up rules in the external security package to interface with OMEGAMON.</td>
</tr>
<tr>
<td>2</td>
<td>Customize, assemble, and link the sample exit routine.</td>
</tr>
<tr>
<td>3</td>
<td>Modify and update the security table to specify the commands you want CA-TOP SECRET to validate.</td>
</tr>
</tbody>
</table>
CA-TOP SECRET: setting up rules

To set up CA-TOP SECRET rules to interface with OMEGAMON, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Define a FACILITY statement for the started task for the realtime collector as a FACILITY in the Facility Matrix Table. If the name you define in the FACILITY statement is different from the started task name, see the CA-TOP SECRET documentation for information on setting up the FACILITY statement.  
The following example shows FACILITY statements from a CA-TOP SECRET installation (some of these statements may not be relevant to your system, and others may need modification):  
  - `FACILITY(USER3=NAME=task)`  
  - `FACILITY(task=MODE=FAIL,ACTIVE,SHRPRF)`  
  - `FACILITY(task=PGM=KOB,NOASUBM,NOABEND,NOXDEF)`  
  - `FACILITY(task=ID=3,MULTIUSER,RES,WARNPW,SIGN(M))`  
  - `FACILITY(task=NOINSTDATA, NORNDPW, AUTHINIT, NOPROMPT, NOAUDIT)`  
  - `FACILITY(task=NOTSOC, LOG(INIT, SMF, MSG, SEC9))`  
  **Important:** The SIGN parameter on the FACILITY statement must be specified as SIGN(M), or TOP SECRET may revoke user access. Also, verify that MODE=FAIL is set, and the MULTIUSER parameter has been included. |
| 2    | Add the facility to users, as follows:  
  - `TSS ADDTO(useracid) FACILITY(cccccccc)`  
  where cccccccc is the started task name you specified for the realtime collector using CICAT. |
| 3    | Define a resource class to the RDT (Resource Descriptor Table), as follows:  
  - `TSS ADDTO(RDT) RESCLASS(KOMCANDL) RESCODE(nn)`  
  where nn is any hexadecimal code between 01 and 3F. |
| 4    | Give ownership to class KOMCANDL, prefixed with INITIAL, as follows:  
  - `TSS ADDTO(deptacid) KOMCANDL(INITIAL)` |
| 5    | Define PERMIT rules for resource INITIALx (where x is 0, 1, 2, 3, or required blank) to allow users to log on to OMEGAMON, as in the following example:  
  - `TSS PERMIT(useracid) KOMCANDL('INITIAL ' )`  
  (trailing blank is required)  
The resource name “INITIAL ” (with required blank) permits users to change their security level with the /PWD command.  
Resource names “INITIAL0” through “INITIAL3” lock a user to the highest matching security level (0, 1, 2, or 3) and prevent that user from changing that level with the /PWD command (this is also referred to as locking). These security levels can be used with OMEGAMON internal security to determine if a particular command is accessible to a user.  
The following example shows how to set users to specific levels:  
  - `TSS PERMIT(useracid) KOMCANDL(INITIAL0) (level 0 commands)`  
  - `TSS PERMIT(useracid) KOMCANDL(INITIAL1) (level 1 commands)`  
  - `TSS PERMIT(useracid) KOMCANDL(INITIAL2) (level 2 commands)`  
  - `TSS PERMIT(useracid) KOMCANDL(INITIAL3) (level 3 commands)` |
Implementing External Security: CA-TOP SECRET

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CA-TOP SECRET: setting up the exit
to set up the exit that interfaces with CA-TOP SECRET:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 6    | Set up a rule for each command you want to protect with CA-TOP SECRET (each protected command will also require the EXTERNAL=YES setting in the security table). This example permits a user to use the PEEK command:  

```
TSS PERMIT(useracid) KOMCANDL(PEEK)
```

If the command you want to secure begins with a slash (/) or period (.), the CA-TOP SECRET rule you define must start with a dollar sign ($) instead of the slash (/), or an at sign (@) instead of the period (.). For example, the command /LOGOUT requires a rule for $LOGOUT.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit and modify the exit `rhilev.midlev.RKANSAM(KOMRACFX)` as follows:  

1. Remove both APPL=M$APPL parameters from the RACINIT MF=L and RACHECK MF=L macros.  
2. Replace this line (line 90):  

```
MVC U#CHCLSD,=C
'

OMCANDLE
```

with the following instructions:

```
MVI U#CHCLS,X'08'
MVC U#CHCLSD,=C'KOMCANDL'
```

The processing logic for this exit is provided in “Command-Level Security Exit Processing Logic” on page 221. Many sites use this exit without modification, but it is documented with comments to facilitate changes.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Assemble and link the exit routine. Use sample job <code>rhilev.midlev.RKANSAM(KOMRACFA)</code>.</td>
</tr>
</tbody>
</table>
CA-TOP SECRET: setting up the security table

To set up the security table, follow these steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit the control statements in the KOMSUPDI member of rhilev.midlev.RKANPAR. “Command-level Security Control Statements” on page 225 describes these control statements.  
   1. Uncomment the MODULE command statement, and enter the name of the exit KOMRACFX on the MODULE statement as follows:  
      MODULE=KOMRACFX  
   2. Indicate which commands are to be validated by CA-TOP SECRET rules by setting EXTERNAL=YES on the COMMAND control statements.  
   3. Indicate which commands are to be validated by OMEGAMON internal security levels by setting LEVEL=n and EXTERNAL=NO on the COMMAND control statements.  
      Important: To change an existing setting for a parameter, you must specify a new setting rather than just blanking out the old setting. For example, to remove a command from external security checking, change EXTERNAL=YES to EXTERNAL=NO. |
| 2    | Modify and submit job KOMSUPD in rhilev.midlev.RKANSAM to update and report on the security table (see “Security Update Program Listing” on page 233). If the update program flags statements as being in error, correct the statements and re-submit job KOMSUPD. |
| 3    | If the started task for the realtime collector is currently active, recycle OMEGAMON. Changes made to the security table are effective only when OMEGAMON has been started after the security update job completes successfully. |

CA-TOP SECRET: protecting the OMEGAMON II for MVS datasets

In order to control access and unauthorized usage of OMEGAMON II programs, we recommend that you set:

- universal access of none to all OMEGAMON II datasets.
- access of read to all OMEGAMON II load libraries for OMEGAMON II started tasks and TSO users using OMEGAMON for MVS. Note that access needs to be read and not execute, because the modules are loaded into storage and then executed.
- access of alter for the OMEGAMON II customizer to all OMEGAMON II datasets.
Chapter Overview

This chapter describes the additional tasks you must perform after installation and CICAT configuration, to run OMEGAMON II for MVS.

These tasks include:

- copying STCs and VTAM definitions to system libraries
- copying customized profile and screen space datasets
- APF-authorizing OMEGAMON II load libraries
- specifying a subsystem name for historical reporting
- authorizing and specifying security for OpenEdition MVS

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Copying Customized Profile and Screen Space Datasets............... 65
APF-Authorizing Load Libraries .................................. 66
Copying KCNDLINT to an APF-authorized LINKLIST Library ....... 67
Specifying a Subsystem Name for Historical Reporting................. 68
Authorizing and Specifying Security for OpenEdition MVS........ 69
Copying STCs and VTAM Definitions to System Libraries

This topic provides information about copying VTAM definitions and started task procedures to system libraries.

Copying VTAM definitions to VTAMLST

CICAT configuration created VTAM definitions in RKANSAM, which you must copy to your VTAMLST library as follows:

1. Copy the OMEGAMON II for MVS VTAM node generated by CICAT from RKANSAM to SYS1.VTAMLST.
2. Confirm that the CMS VTAM node you specified to CICAT was copied from RKANSAM to SYS1.VTAMLST.

Copying STCs to the started task library

CICAT configuration created started task procedures in RKANSAM, which you must copy to your started task library. When you copy, you can rename the procedures to meet your site’s requirements.

Update a proclib in your JES proclib concatenation as follows.

1. Confirm that the Candle Subsystem started task, KCNDL, was copied from RKANSAM to PROCLIB.
2. Copy the OMEGAMON II for MVS presentation task address space from RKANSAM to PROCLIB.
3. Confirm that the CMS started task you specified to CICAT was copied from RKANSAM to PROCLIB.
Copying Customized Profile and Screen Space Datasets

This topic provides information about copying customized profiles and screen spaces from prior versions of classic OMEGAMON for MVS to the RKOMPFSV and RKOMPCSV datasets.

Copying profiles to RKOMPFSV

Candle stores the standard profiles, that are shipped with OMEGAMON II, used in the menu and command interfaces, and referenced by the RKOMPROF DD statement, in the rhilev.midlev.RKOMPROF dataset.

When you create customized profiles, they are stored in the RKOMPFSV dataset. To use customized profiles from a prior version of OMEGAMON for MVS, copy these profiles into the RKOMPFSV dataset.

Copying screen spaces to RKOMPCSV

Candle stores the standard screen spaces, that are shipped with OMEGAMON II, used in the menu and command interfaces, and referenced by the RKOMPROC DD statement, in the rhilev.midlev.RKOMPROC dataset.

When you create customized screen spaces, they are stored in the RKOMPCSV dataset. To use customized screen spaces from a prior version of OMEGAMON for MVS, copy these screen spaces into the RKOMPCSV dataset.
APF-Authorizing Load Libraries

This section provides information about APF-authorizing OMEGAMON II load libraries.

APF-authorizing the load libraries

You must APF-authorize one or more load libraries, depending on whether or not you are running the OMEGAMON II for MVS CUA interface.

For the OMEGAMON for MVS (Realtime Collector) interface, you must APF-authorize rhilev.midlev.RKANMOD.

If one library in a steplib or joblib concatenation is required to be APF-authorized, you must APF-authorize all libraries in the concatenation or all libraries will lose their APF status.

For the OMEGAMON II for MVS CUA interface, you must additionally APF-authorize the following load libraries, when present, in the OMEGAMON II for MVS started task:

- rhilev.midlev.RKANMODL
- rhilev.midlev.TKANMODL
Copying KCNDLINT to an APF-authorized LINKLIST Library

This topic provides information about copying the Candle Subsystem initialization module, KCNDLINT, to an APF-authorized LINKLIST.

Updating the link list

You must copy the KCNDLINT load module, located in `rhilev.midlev.RKANMOD`, to an APF-authorized LINKLIST library.

**Note:** If you are executing OMEGAMON II from the SMP (target) libraries, you should copy KCNDLINT from TKANMOD rather than RKANMOD.
Specifying a Subsystem Name for Historical Reporting

The subsystem ID that you specify in the started task procedures for OMEGAMON II and the historical data collector is used to retrieve historical data for OMEGAMON II panels. This subsystem ID must be unique on the MVS image.

What about multiple copies?

If you plan to run multiple copies of OMEGAMON II on one MVS image, you must use one subsystem ID in the started tasks for OMEGAMON II and historical data collector in one copy, and a different subsystem ID in the started tasks for OMEGAMON II and historical data collector in each of the other copies. The procedure to accomplish this follows.

Procedure

To run multiple copies of OMEGAMON II on one MVS image, follow the procedure below:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the second copy of OMEGAMON II, edit the started task procedures for OMEGAMON II for MVS and the historical data collector. (The started task procedures have the name you specified for the started tasks using CICAT.)  

  //SSCT#### DD DUMMY  

  statements to make the #### strings, which is the subsystem name, the same in both procedures, but different from the string used in the first copy of OMEGAMON II (#### by default).  

  **Note:** Do not substitute CNDL for the #### string. CNDL is the subsystem ID of the Candle Subsystem. |
| 2    | Continue in this fashion until you have entered a unique subsystem ID in each of the pairs for each copy of OMEGAMON II. |
Authorizing and Specifying Security for OpenEdition MVS

This topic covers the authorization requirements and security requirements for OpenEdition MVS.

Authorization Requirements

If you are using OpenEdition MVS, you must authorize the Candle Management Server (CMS) for OpenEdition MVS services. The user default group must be an OpenEdition MVS group.

Security requirements

If you are using an external security package, such as RACF, you must also identify the CMS to your security package as an OpenEdition MVS user.
Chapter Overview

This chapter guides you through additional configuration steps that lie outside the OMEGAMON II for MVS product.

Chapter Contents

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Configuring the CSA Analyzer ........................................... 73
Configuring for Amdahl Processors

If you are using an Amdahl Processor, review the information in this topic.

**Procedure**

If you are running OMEGAMON II on an Amdahl™ processor, copy module KOM$RMIR from rhilev.midlev.RKANMOD to a linklist library. Module KOM$RMIR is used for MDF interface cleanup at the time of OMEGAMON II termination.
Configuring the CSA Analyzer

The CSA Analyzer provides common storage usage information through the OMEGAMON for MVS CSAA and CSAF commands. The following text describes how to configure the CSA Analyzer under various MVS environments. These steps are optional.

Configuring for MVS/SP 4.3.0 and above:

Perform the following steps to configure the CSA Analyzer on systems running MVS/SP 4.3.0 and above:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Define the CSA Analyzer as a subsystem in the IEFSSNxX member of SYS1.PARMLIB. If it is not defined, the CSA Analyzer dynamically defines itself during initialization. The subsystem name is CSAA.</td>
</tr>
<tr>
<td>2</td>
<td>Modify the CSA Analyzer subsystem startup parameters to suit your system. These parameters are explained in “Modifying startup parameters” on page 74.</td>
</tr>
</tbody>
</table>
| 3    | Configure the MVS system initialization parmlib DIAGxx member to reflect what areas of common storage should be tracked by the MVS VSM common storage tracking function. There are two keyword control specifications for the VSM Common Storage Tracking that will affect the CSA Analyzer:

- **CSA (ON|OFF)** - Tracking common service areas (CSA & ECSA) status
- **SQA (ON|OFF)** - Tracking system queue areas (SQA & ESQA) status

If both CSA and SQA controls specify OFF, the CSA Analyzer will not provide any common storage tracking information. The default configuration member provided by MVS/ESA™ SP 4.3.0 specifies OFF for both keyword controls. The CSA Analyzer startup parameter MON= (specified in the started task procedure member) is ignored when operating on MVS/ESA SP 4.3.0 systems. |
| 4    | Provide for automatic enabling of the MVS Common Storage Tracking function (see the MVS/ESA SP 4.3.0 Initialization and Tuning Reference). Enabling at IPL time will provide the maximum amount of common storage usage information. |

Considerations for versions prior to MVS/SP 4.3.0

The following considerations apply when you attempt to configure CSA Analyzer on systems running MVS/SP versions prior to 4.3.0:

- You can implement the CSA Analyzer subsystem using either the MASTER subsystem or the primary job entry subsystem. We recommend that you start the CSA Analyzer subsystem under the MASTER subsystem to allow for maximum collection of data.
- Any storage obtained before the start of the CSA Analyzer subsystem will not be analyzed.
- The CSA Analyzer subsystem may not be able to co-exist with common storage monitors from other vendors.
Configuring the CSA Analyzer

Configuring under the MASTER subsystem

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Copy the Candle-supplied CSA Analyzer PROC from rhilev.midlev.RKANSAM to SYS1.PROCLIB, or to a dataset in the IEFPSI DD concatenation (IEFPDSI is a DD statement in the master scheduler JCL found in the member MSTJCL00 in SYS1.LINKLIB).</td>
</tr>
</tbody>
</table>
| 2 | Access the CSA Analyzer load modules from the LPA list, the linklist concatenation, or through the STEPLIB concatenation. The CSA Analyzer load modules are in rhilev.midlev.RKANMOD, and are prefixed with KCS.  
If you use the linklist concatenation, you must perform an LLA refresh or an IPL after configuration is complete.  
If you use STEPLIB, you must catalog the dataset in the master catalog or specify the UNIT= and VOL=SER= parameters. |
| 3 | In the master catalog, catalog the load library containing the CSA Analyzer load modules, as well as any other datasets referenced in the CSA Analyzer PROC. Or, specify the UNIT= and VOL=SER= parameters. |
| 4 | No SYSIN or SYSOUT datasets are allowed. Therefore, a SYSUDUMP is not allowed if it is for a SYSOUT dataset. For a SYSUDUMP to be present, you must point it to a DASD dataset cataloged in the master catalog or specify the UNIT= and VOL=SER= parameters. |
| 5 | To start the CSA Analyzer under the MASTER subsystem, use the following form of the MVS START command:  
*S cccccccc,SUB=MSTR  
where cccccccc is the started task name you specified for the CSA Analyzer using CICAT.  
To automate the startup of CSA Analyzer, place the MVS start command for CSA Analyzer started task in SYS1.PARMLIB(COMMNDxx). |

Modifying startup parameters

You can change the CSA Analyzer startup parameters from the supplied default by modifying the CSA Analyzer PROC. Modify the sample PROC supplied in rhilev.midlev.RKANMOD to suit your installation. We recommend that you use the default values initially, and modify the parameters as needed.

The following table describes the CSA Analyzer startup options and defaults:

<table>
<thead>
<tr>
<th>Parameter to Change</th>
<th>Symbolic</th>
<th>Supplied Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved number of bytes of unused ECSA</td>
<td>RESV=nnnnnn</td>
<td>0</td>
</tr>
<tr>
<td>Target sampling accuracy percentage</td>
<td>SAMP=nnn</td>
<td>100</td>
</tr>
<tr>
<td>Region size</td>
<td>REG=nnnn</td>
<td>2M</td>
</tr>
<tr>
<td>CPU time limit</td>
<td>TIM=nnnn</td>
<td>1439</td>
</tr>
<tr>
<td>Dispatching priority</td>
<td>PRTY=(xx,yy)’</td>
<td>’(15,15)’</td>
</tr>
</tbody>
</table>
Configuring the CSA Analyzer

Understanding startup parameter symbolics

The following table describes the symbolics in detail:

<table>
<thead>
<tr>
<th>Parameter to Change</th>
<th>Symbolic</th>
<th>Supplied Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas to be monitored</td>
<td>MON=('aaaa,...')’</td>
<td>'(CSA,ECSA,SQA,ESQA )'</td>
</tr>
<tr>
<td>System trend interval</td>
<td>SINT=nn</td>
<td>15</td>
</tr>
<tr>
<td>Number of system trend buckets</td>
<td>SNUM=nnn</td>
<td>96</td>
</tr>
<tr>
<td>Job trend interval</td>
<td>JINT=nn</td>
<td>5</td>
</tr>
<tr>
<td>Number of job trend buckets</td>
<td>JNUM=nnn</td>
<td>6</td>
</tr>
</tbody>
</table>

**Use this symbolic...** | **To specify the...**
--- | ---
RESV=nnn | Reserved number of bytes of ECSA unused by the CSA Analyzer. This reserved space is a storage cushion that can be used by any task other than the CSAA. If the CSAA cannot obtain ECSA storage while leaving this reserved space, message CSAA804E will be issued and the CSAA will suspend its data collection.
SAMP=nnn | Target sampling accuracy percentage. You can use this parameter to reduce the CPU processing used in sampling common storage consumption in exchange for a lower degree of accuracy.
If you specify SAMP=100, sampling will always occur once a second. If you specify a value less than 100, the CSA Analyzer will not sample if the summary allocation totals for each common storage area are within your sampling percent of the values in the Global Data Area (GDA).
The valid range of values is 95 to 100.
REG=nnnn | Size of the region in which the CSA Analyzer address space runs.
TIM=nnnn | CPU time limit for the CSA Analyzer. A low value may prematurely terminate the CSA Analyzer subsystem.
PRTY=('xx.yy)’ | Dispatching priority for the CSA Analyzer. If the dispatching priority is too low, the CSA Analyzer may not be able to collect data on all events. Your ICS and IPS values might override this value.
MON=('aaaa,...)’ | Common storage areas to be monitored by the CSA Analyzer. One or more of the following areas may be specified: CSA, ECSA, SQA and ESQA.
The MON= parameter is ignored when running on MVS/ESA SP 4.3.0 or above. The common storage areas to be monitored by the CSA Analyzer must be specified in the MVS system initialization PARMLIB member DIAGxx.
SINT=nn | Interval length (in minutes) between sampling of common storage used for system trending information. Adjust this parameter in conjunction with the SNUM= parameter to show meaningful system trending information for your installation. The valid range of values is 1 to 60.
Implementing CSA Analyzer IPCS support

The CSA Analyzer provides an IPCS verb exit that allows you to view CSA Analyzer data in an MVS system dump. The IPCS verb exit is a load module contained in `rhilev.midelv.RKANMOD(KCSIPCS)`. The KCSIPCS load module must reside in a load module library that is available to IPCS, such as a step library, job library, or a link library.

To access the KCSIPCS module, issue the following command from an IPCS session:

`VERBX KCSIPCS 'parm'`

where `parm` is one of the following parameters:

- **SUMMARY**  
  Produces output similar to that of the OMEGAMON CSAA USAGE and CSAA SUMMARY commands. This parameter is the default.

- **DETAIL**  
  Produces all the information provided by the SUMMARY parameter, plus the storage block information produced by the CSAA DETAIL command.

- **STORAGE**  
  Produces all the information provided by the DETAIL parameter, plus the first 16 bytes of each GETMAINed element, in hexadecimal and character format.

If you want to run IPCS as a batch job, put a VERBX entry in the appropriate IPCS control member of SYS1.PARMLIB.
Chapter Overview

This chapter describes the procedures to verify that OMEGAMON II has been configured properly. It includes a description of the procedures for starting OMEGAMON II, logging on and off, and stopping OMEGAMON II and its supporting components. It also lists some common operational problems and suggests solutions.

Chapter Contents

Verifying the Configuration by Operating OMEGAMON II for MVS . . . . . . . . 78
Verifying the Candle Subsystem Configuration . . . . . . . . . . . . . . . . . . . . . 82
Setting Dispatch Priorities/Velocity Goals for Started Tasks . . . . . . . . . . 83
Verifying the Installation of End-to-End . . . . . . . . . . . . . . . . . . . . . . . . . 85
Verifying the Configuration by Operating OMEGAMON II for MVS

This topic describes how to start and stop OMEGAMON II for MVS, and how to log on and log off. When you can start the OMEGAMON II started task, log onto OMEGAMON II. Then, perform some basic verification steps so that you know that OMEGAMON II has been properly installed and configured.

Starting OMEGAMON II

Start OMEGAMON II by performing the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | If you have configured the Candle Subsystem and it is not already running:  
      | Start the started task for the Candle Subsystem. |
| 2    | If you have configured the Candle Management Server (CMS), and it is not already running:  
      | Vary the Hub CMS node active, substituting the Hub CMS node for nodename on the VARY command.  
      | Start the started task procedure for the Hub CMS. (The name is the started task name you specified for the CMS using CICAT.)  
      | Note: If you plan to run ETE in your environment, you should start that product prior to starting the CMS. |
|      | The Candle Management Server must be running for:  
      | Reporting on an MVS system running in goal mode.  
      | Expanded Enqueue Reporting:  
      | Identify enqueue holders and requestors.  
      | OpenEdition MVS Support:  
      | Display address spaces within the kernel.  
      | Dispatcher Enclave Support:  
      | Display dispatcher enclave CPU utilization. |
| 3    | Vary the OMEGAMON II VTAM node active either:  
      | By issuing a VARY ACTIVE command from the MVS console, for example:  
      | VARY NET.ACT,ID=nodename,SCOPE=ALL  
      | Or adding a VARY ACTIVE command to the started task OMEGAMON II |
Verifying the Configuration by Operating OMEGAMON II for MVS

4. Start the started tasks for the Hub OMEGAMON II. This can be accomplished in either of the following ways:
   - Issue the following MVS START commands (S ccccccc) from the MVS console for the started task names for:
     - End-to-End
     - CSA Analyzer
     - M2
     - realtime collector
     - historical data interface
     - historical data collector
     - Zoom-to-EPILOG
   - In the started task procedure for OMEGAMON II for MVS, add MVS start commands for each of the above components except for the started task for OMEGAMON II for MVS. Then, start the started task for OMEGAMON II for MVS.

5. Perform the appropriate action:
   - Vary the Remote CMS node active, substituting the Hub CMS node for nodename on the VARY command.
   - Start the started task procedure for the Remote CMS. (The name is the started task name you specified for the CMS using CICAT.)

6. Start the started tasks for the Remote OMEGAMON II. This can be accomplished in either of the following ways:
   - Issue the following MVS START commands (S ccccccc) from the MVS console for the started task names for:
     - End-to-End
     - CSA Analyzer
     - M2
     - realtime collector
     - historical data interface
     - historical data collector
     - Zoom-to-EPILOG
   - In the started task procedure for the Remote OMEGAMON II, add MVS start commands for each of the above components except for the started task for OMEGAMON II for MVS. Then, start the started task for OMEGAMON II for MVS.

Note: For information concerning installation and startup of CSA Analyzer, refer to “Configuring the CSA Analyzer” on page 73.

Logging onto OMEGAMON II

This topic describes how to log on to an OMEGAMON II session and verify that your installation was successful.

Note: If you are the first person to log on to OMEGAMON II, your user ID becomes the initial OMEGAMON II administrator. If you are not the OMEGAMON II administrator for your site, you must grant administrator...
authority to the appropriate user ID as described in “Controlling System Administrator Authority” on page 214.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Check with your data center to be sure that OMEGAMON II has been started and is operational.</td>
</tr>
</tbody>
</table>
| 2    | Log on to OMEGAMON II as follows:  

LOGON APPLID(ccccccccc)  
where cccccccc is the started task name you specified for OMEGAMON II for MVS using CICAT. |
| 3    | When the Candle copyright screen appears, press Enter. |
| 4    | When the Sign On panel appears, enter your user ID and password. |
| 5    | The Establishing OMEGAMON II Environment panel appears. Once your session is established, the System Status panel appears. |
| 6    | Verify that the OMEGAMON and EPILOG components have been properly installed:  

1. On the System Status panel, enter GO to access OMEGAMON for MVS.  
2. To return to OMEGAMON II, enter END.  
3. When the OMEGAMON Exit Confirmation panel appears, enter X.  
4. On the System Status panel, enter GE to access EPILOG for IMS.  
5. Return to OMEGAMON II by entering END. |

Logging off OMEGAMON II

To log off an OMEGAMON II session, press F3 until the Exit Confirmation panel displays. Then, press F3 or enter X to exit.

Stopping OMEGAMON II and the supporting components

Stopping OMEGAMON II does not automatically stop its supporting components, such as OMEGAMON for MVS, EPILOG for IMS CSA, ETE, and the CMS. You must stop these components individually by issuing STOP commands.

You should stop OMEGAMON II and the supporting components in the following order:

- First, stop OMEGAMON II.
- Second, stop the supporting components.
- Third, stop the CMS.

To stop the OMEGAMON II started task or started tasks for most of the components, use the MVS STOP command from a system operator console. The format of the STOP command is:

STOP cccccc

where cccccc is the started task name you specified using CICAT.
If you are using the ETE feature with other Candle products, use the ETE QUIESCE command to stop ETE. Do not use the MVS STOP command, since this command stops only the ETE address space, but not the ETE subsystem. The QUIESCE command is entered on the MVS console as follows:

**ETE QUIESCE**

Do not vary the OMEGAMON II VTAM node inactive until you terminate all address spaces.
Verifying the Candle Subsystem Configuration

This topic describes how to verify the configuration of the Candle Subsystem.

Verifying the configuration

If this is a first time installation of the Candle Subsystem and the MVS dynamic subsystem function is not used, you must perform an IPL to verify the configuration. After IPL, the syslog should contain message CNDL184I, informing you that the Candle Subsystem initialization routine has completed. If you do not receive this message, check your update to the IEFSSNxx member of SYS1.PARMLIB.

If you have chosen automatic startup of the Candle Subsystem address space, you should see messages CNDL001I, CNDL190I, CNDL034I, and CNDL027I.

If you have not chosen automatic startup, you may issue the MVS START command to start the subsystem. You should then see the four messages previously mentioned. The format of the MVS START command is:

```
START kcndl
```

where `kcndl` is the name you have given the Candle Subsystem JCL procedure.

Using the RESTART parameter

The optional RESTART parameter forces the subsystem to complete initialization, bypassing checks designed to prevent the start of a second address space.

**Important**

You should use RESTART only if the subsystem address space terminates abnormally and subsequent attempts to start the subsystem result in message CNDL018I. (This message indicates that the subsystem is already active.) Verify that the subsystem address space named in message CNDL018I is not active before using RESTART.

If RESTART is used when the subsystem is already active, results are unpredictable.

RESTART requires the FORCE operand, as in this example:

```
START kcndl,RESTART=,'RESTART=FORCE'
```

You can stop the subsystem by issuing the MVS STOP command, as in this example:

```
STOP kcndl
```
Setting Dispatch Priorities/Velocity Goals for Started Tasks

This topic discusses setting dispatching priorities for compatibility mode and velocity goals for goal mode.

Table of dispatching priorities

The minimum recommended dispatching priorities for OMEGAMON II started tasks are listed in the following table. The started tasks are the started task names you specified for the different components using CICAT.

<table>
<thead>
<tr>
<th>Started Task</th>
<th>Minimum Dispatch Priority</th>
<th>Rationale for Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMEGAMON II non-VTAM, dedicated address space (if in use)</td>
<td>Above VTAM</td>
<td>Monitors entire system, needs sampling accuracy and ability to control all looping tasks.</td>
</tr>
<tr>
<td>OMEGAMON for MVS non-VTAM, dedicated mode (if in use)</td>
<td>Above VTAM</td>
<td>Monitors entire system, needs sampling accuracy and ability to control all looping tasks.</td>
</tr>
<tr>
<td>OMEGAMON II for MVS historical data collector</td>
<td>Above VTAM</td>
<td>Needs view of all workloads and sampling accuracy.</td>
</tr>
<tr>
<td>OMEGAMON for MVS realtime collector</td>
<td>Either above or just below VTAM</td>
<td>Monitors all activity, needs sampling accuracy and ability to control looping tasks. If above VTAM, then effective VTAM monitoring/control can be done.</td>
</tr>
<tr>
<td>Candle Management Server</td>
<td>Same as the started task for the realtime monitor</td>
<td>Collects performance data and needs sampling accuracy.</td>
</tr>
<tr>
<td>Candle Subsystem</td>
<td>Same as the started task for the realtime monitor</td>
<td>Data gatherer that requires priority for accuracy.</td>
</tr>
<tr>
<td>CSA Analyzer collector</td>
<td>Below KCNDL</td>
<td>High priority to avoid overruns and excess frame use.</td>
</tr>
<tr>
<td>ETE collector</td>
<td>Below the started task for the realtime monitor</td>
<td>High enough priority to avoid data loss.</td>
</tr>
<tr>
<td>OMEGAMON II</td>
<td>Above TSO period 1 (or higher)</td>
<td>Directly affects OMEGAMON II end-user response time.</td>
</tr>
<tr>
<td>Historical data interface</td>
<td>Same as regular batch</td>
<td>Batch-like workload, which does not require high urgency.</td>
</tr>
<tr>
<td>Zoom-to-EPILOG</td>
<td>Same as regular batch</td>
<td>Batch-like workload, which does not require high urgency.</td>
</tr>
</tbody>
</table>
**Table of velocity goals**

Candle suggests the following values for OMEGAMON II started tasks, if you are running in goal mode (for MVS/ESA 5.1 goal mode sites). The started tasks are the started task names you specified for the different components using CICAT.

**Note:** These are suggested values only. You will need to review and tailor these values based on your business requirements and the values assigned to their existing critical workloads.

**Table 11. Dispatching Priorities**

<table>
<thead>
<tr>
<th>Started Task</th>
<th>Service Class</th>
<th>Velocity</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMEGAMON II non-VTAM, dedicated address space</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>OMEGAMON II for MVS non-VTAM, dedicated mode</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>EPILOG for MVS historical data collector</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>OMEGAMON II for MVS realtime collector</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Candle Management Server</td>
<td>CMSSTC</td>
<td>70</td>
<td>2</td>
</tr>
<tr>
<td>Candle Subsystem</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>CSA Analyzer collector</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>ETE collector</td>
<td>SYSSTC</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>OMEGAMON II for MVS</td>
<td>STCHI</td>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>Historical data interface</td>
<td>STCMED</td>
<td>40</td>
<td>3</td>
</tr>
<tr>
<td>Zoom-to-EPILOG</td>
<td>STCMED</td>
<td>40</td>
<td>3</td>
</tr>
</tbody>
</table>

These values are based on the assumption that all critical workloads will be running in service classes that have an importance level of 1. If critical workloads are running in service classes with an importance level of 2, you should consider lowering the importance level of:

- the started tasks for the Candle Management Server and OMEGAMON II for MVS to 3
- the started tasks for the historical data interface and the Zoom-to-EPILOG to 4
Verifying the Installation of End-to-End

This topic describes how to verify the installation of End-to-End.

Verifying End-to-End

To verify the installation of ETE, perform the following procedure.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Start ETE by issuing the following command from the MVS operator console:  
      |        | S cccccccc  
      |        | where cccccccc is the started task name you specified for ETE using CICAT.  
      |        | The JCL procedure starts the ETE address space. If ETE started successfully, the program displays a message indicating that ETE was successfully initialized. |
| 2    | To verify that ETE started correctly, issue the following command from the MVS operator console.  
      |        | ETE USERS  
      |        | The following output should be displayed.  
      |        | ETE USERS  
      |        | ETE0002: ETE V160 #00 LOAD DSN=CANDLE.RKANMOD  
      |        | ETE0040: JOBNAME ASID TCB TYPE  
      |        | ETE0041: USER001 00176 007BE458 RSPTIME  
      |        | ETE0041: cccccccc 00175 007EDB80 CAPTURE  
      |        | ETE0041: cccccccc 00175 007EF1F8 CAPTURE  
      |        | ETE0041: cccccccc 00175 007EF1F8 CAPTURE  
      |        | ETE0003: COMPLETE  
      |        | The cccccccc indicates the started task name for ETE. |
      |        | This output shows the ETE version number, as well as the load libraries from which you have installed ETE. The ETE started task name will appear in the display several times because ETE is a user of its own internal services. |
Chapter Overview
This chapter helps you troubleshoot your OMEGAMON II configuration by listing some common operational problems, causes, and solutions.

Chapter Contents
Problems Starting OMEGAMON II and Logging On ......................... 88
Problems Involving Lacking or Incorrect Output ......................... 90
Problems Involving OEM VSAM Optimizer Conflicts ................. 92
Problems Starting OMEGAMON II and Logging On

This topic discusses problems starting OMEGAMON II and logging on.

OMEGAMON II does not start

You receive an 80A abend, then OMEGAMON II terminates.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The OMEGAMON II region is too small.</td>
<td>Region = 0M should be specified.</td>
</tr>
</tbody>
</table>

Unable to log on to OMEGAMON II

You receive a message from VTAM or OMEGAMON II saying that you are unable to log on to OMEGAMON II.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command-level security has not been implemented, and OMEGAMON II is unable to connect with OMEGAMON. This situation is usually indicated by the MVS console message OB0987 PRODUCT INITIALIZATION FAILED with a return code of 32.</td>
<td>Perform one of the procedures described in “Command-level security choices” on page 44.</td>
</tr>
<tr>
<td>The OMEGAMON II logon applid is not active on this system.</td>
<td>Vary the node and applid active, recycle OMEGAMON II, then try again.</td>
</tr>
<tr>
<td>The OMEGAMON II logon applid is missing from SYS1.VTAMLST.</td>
<td>Check rhilev.midlev.RKANCMD (KM2DLOGS) to be sure the logon applid is correct, and that it is included in the major OMEGAMON II node in SYS1.VTAMLST.</td>
</tr>
</tbody>
</table>
**OMEGAMON II internal logon to OMEGAMON for MVS fails**

When you log on to OMEGAMON II, most status lights are blue, and you see a pop-up saying the attempt to log on to OMEGAMON for MVS has failed.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The OMEGAMON for MVS VTAM applid is not active.</td>
<td>Vary it active, recycle OMEGAMON for MVS, and try again.</td>
</tr>
<tr>
<td>The OMEGAMON for MVS applid is not specified correctly in…</td>
<td>Check the applid to make sure the value in member KM2IPARM matches the label field of the APPL statement in the OMEGAMON II major node.</td>
</tr>
<tr>
<td>The virtual terminal pool applids listed in… are either not defined properly,</td>
<td>Check these applids to be sure they match the applids in the major node, and that they are varied active. See “System Names” on page 237 for more information.</td>
</tr>
<tr>
<td>The 20 virtual terminal applids that OMEGAMON II supplies are in use.</td>
<td>Try again later or increase the number of maximum users.</td>
</tr>
<tr>
<td>OMEGAMON for MVS is not accepting logons because the maximum number of…</td>
<td>Increase the maximum users parameter for zoom-to-OMEGAMON.</td>
</tr>
</tbody>
</table>
Problems Involving Lacking or Incorrect Output

This topic addresses problems that may cause some functions to fail to produce output or to produce incorrect output.

Some functions fail to produce output

You log on to OMEGAMON II, but certain functions do not produce output.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>By default, internal command-level security activates password protection for all authorized commands.</td>
<td>Open the Options pull-down, select <strong>Controls</strong>; select <strong>Set realtime command-level password</strong>, and enter the command-level password.</td>
</tr>
<tr>
<td>You do not have the authority to execute OMEGAMON for MVS authorized commands.</td>
<td>Update the OMEGAMON for MVS security table or external security rules.</td>
</tr>
<tr>
<td>The Candle Management Server has not been started. This will affect output for:</td>
<td>Start the Candle Management Server</td>
</tr>
<tr>
<td>- Expanded Enqueue Reporting: Identify enqueue holders and requestors.</td>
<td>Refer to <strong>Planning: OpenEdition MVS</strong> under the topic <strong>Defining OpenEdition MVS Users.</strong></td>
</tr>
<tr>
<td>- Dynamic Log Support: Allow users to turn OMEGAMON log on and off.</td>
<td></td>
</tr>
<tr>
<td>- OpenEdition MVS Support: Display address spaces within the kernel.</td>
<td></td>
</tr>
<tr>
<td>- MVS Shared Pages Support: Display MVS storage map for shared pages support.</td>
<td></td>
</tr>
<tr>
<td>- Preemptable SRB Support: Display CPU time/utilization percent.</td>
<td></td>
</tr>
<tr>
<td>- Dispatcher Enclave Support: Display dispatcher enclave CPU utilization.</td>
<td></td>
</tr>
<tr>
<td>The Candle Management Server started task needs to be defined as an OpenEdition user.</td>
<td></td>
</tr>
</tbody>
</table>
Device statistics do not appear to be accurate on MVS systems at level 4.2 or higher
When analyzing realtime or historical reports, device statistics do not appear to be accurate.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MVS system is at level 4.2 or higher. and</td>
<td></td>
</tr>
<tr>
<td>Either a dynamic reconfiguration has occurred or devices are configured into the system with the hardware configuration definition (HCD) function. and</td>
<td></td>
</tr>
<tr>
<td>The Candle Subsystem has not been started.</td>
<td>Start the Candle Subsystem started task procedure kcnd1.</td>
</tr>
</tbody>
</table>
Problems Involving OEM VSAM Optimizer Conflicts

This topic discusses resolving VSAM optimizer conflicts.

VSAM optimizer conflicts

Follow this procedure to resolve VSAM optimizer conflicts. Conflicts between OMEGAMON II for MVS and these VSAM optimizers have been reported:

- /G01 XA/VSAM—Quantum International
- /G01 HYPER-BUF®—Goal Systems
- /G01 SIO/VSO—Systems Connection Incorporated

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Check the sysout log (DDNAME TLVLOG) for the OMEGAMON II for MVS started task for the following error messages:  

   KLVVS021 Logic Error RPLFDBND 78080068........  
   RPFLOACD 40860000  
   KLVINNAM R15 (14) |
| 2    | If the error messages in step 1 occur, turn off VSAM optimization for the following VSAM datasets:  

   rhilev.RKM2NAM  
   rhilev.RKDSIOBJ  
   rhilev.RKDSMSGC  
   rhilev.RKDSCATC  
   rhilev.RKM2TDB  
   rhilev.VIEWLOG |
Chapter Overview

This chapter describes how to configure a special OMEGAMON II address space that allows OMEGAMON II to run on a dedicated terminal (a locally attached, non-SNA 3270 device) and how to start and stop the address space after it is installed. Instructions for running OMEGAMON II from a non-VTAM (dedicated) device are described in the OMEGAMON II for MVS User’s Guide.

The OMEGAMON II dedicated session operates similarly to an OMEGAMON II VTAM mode session. Since the dedicated session does not use VTAM services, zooming to OMEGAMON or EPILOG is not possible. A dedicated session can run alone or while the VTAM-based OMEGAMON II address space is running.

Chapter Contents

Setting up the Dedicated Address Space ........................................ 94
Using the Dedicated Address Space ............................................. 98
Setting up the Dedicated Address Space

This topic discusses setting up a dedicated address space.

Setting parameter values

The two tables below list the values that are used in the installation and customization steps that follow in this topic. The first table contains parameter values that you established when you first installed OMEGAMON II. The second table contains new parameters specific to the special OMEGAMON II address space that allows OMEGAMON II to run on a dedicated device.

The following table lists existing parameters:

<table>
<thead>
<tr>
<th>Description</th>
<th>Variable Name/Default</th>
<th>Your Site-Specific Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Runtime VSAM library high-level qualifier</td>
<td>&amp;rvhilev</td>
<td></td>
</tr>
<tr>
<td>Runtime dedicated library high-level qualifier</td>
<td>&amp;rhilev.midlev</td>
<td></td>
</tr>
<tr>
<td>Runtime dedicated library VOLSER</td>
<td>&amp;rvol</td>
<td></td>
</tr>
<tr>
<td>Runtime dedicated library UNIT TYPE</td>
<td>&amp;runit</td>
<td></td>
</tr>
</tbody>
</table>

The following table lists new parameters for the dedicated mode OMEGAMON II address space:

<table>
<thead>
<tr>
<th>Description</th>
<th>Variable Name/Default</th>
<th>Your Site-Specific Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMEGAMON II dedicated started task name</td>
<td>Default: KM2PDMOD</td>
<td></td>
</tr>
<tr>
<td>Dedicated 327n device address(s)</td>
<td>Default: None</td>
<td></td>
</tr>
</tbody>
</table>

Setting up the libraries

This topic describes how to update your existing runtime libraries with new members. This enables you to run the OMEGAMON II in dedicated mode.
Perform the following steps to update members in your OMEGAMON II libraries.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit the following new members in rhilev.midlev.RKANPAR, and change rvhilev to your site-specific value:  
  - KM2DNVLG  
  - KM2DNNAM  
  - KM2DNTB |
| 2    | Edit member rhilev.midlev.RKANCMD(KM2DEDS), and change the UNIT-<unit> or DEV-<device number parameter in the DEDICATE command statement to the unit address or device number of the local 327n that you will be using for the dedicated session. |

Managing memory requirements

The OMEGAMON II dedicated address space is shipped with carefully selected default memory allocations that should result in efficient performance at most sites. You can, however, adjust these memory allocations if needed. Adjustments are more likely to be required, if your site has a large system configuration and is running multiple dedicated sessions.

To adjust the default memory allocations,

- Edit rhilev.midlev.RKANPAR(KM2DSYSN), and adjust the RESERVE statements as needed.

The RESERVE statements in the KM2DSYSN member specify, in kilobytes, the amount of primary and extended storage to set aside for other routines that perform their own GETMAINs in the special OMEGAMON II address space. Primary storage is below the 16-megabyte line; extended storage is above the line.

The RESERVE value must not be larger than the MINIMUM value or the special OMEGAMON II address space terminates.

**Note:** If your RESERVE value is too small, you may encounter I EW4000I messages when attempting to sign onto the dedicated session.
Setting up the runtime datasets and JCL

The dedicated mode OMEGAMON II address space started task uses the datasets listed in the table below.

<table>
<thead>
<tr>
<th>Dataset Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$r główna.DMODE.RKM2NAM</td>
<td>Security definitions</td>
</tr>
<tr>
<td>$r görüle.DMODE.RKM2TDB</td>
<td>Profile definitions</td>
</tr>
<tr>
<td>$r görüle.DMODE.RKM2VLOG</td>
<td>Message log</td>
</tr>
</tbody>
</table>

Perform the following step if you:

- are already running OMEGAMON II in VTAM mode and you want to run in dedicated mode
- want to use the V400 or V500 profiles and security configuration for dedicated mode in V520

The following procedure copies existing security and profile definitions, and create runtime datasets.

- Edit and submit member $r görüle.midlev.RKANSAM(KM2DCDAT).

This procedure creates the datasets listed above using REPRO to copy your $r görüle.RKM2NAM (security definitions) and your $r görüle.RKM2TDB (profile definitions) datasets to $r görüle.DMODE.RKM2NAM and $r görüle.DMODE.RKM2TDB.

OR

If you do not want to copy existing security and profile definitions, perform the following step:

- Edit and submit member $r görüle.midlev.RKANSAM(KM2DADAT) to create the datasets.

Customizing your dedicated started task

To customize your dedicated started task, complete these steps.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit $r görüle.midlev.RKANSAM(KM2PDMOD).</td>
</tr>
<tr>
<td>2</td>
<td>Change $r görüle.midlev to site-specific values. If you are using a different started task name, change the header to your site-specific value.</td>
</tr>
<tr>
<td>3</td>
<td>Copy the member to a system started task library, renaming the member to the default name or your site-specific value.</td>
</tr>
</tbody>
</table>
Changing the Historical Data Interface

Enhancements made to the Historical Data Interface (HDI) enable the dedicated OMEGAMON II and any additional OMEGAMON II you run on your system to obtain historical data from a single HDI address space.

To obtain historical data in the dedicated mode OMEGAMON II address space, perform one of the following procedures:

1. Without an intervening IPL, change the SSCT DD statement in your started task JCL for the following started tasks:
   - OMEGAMON II for MVS
   - historical data interface
   - OMEGAMON II non-VTAM dedicated address space

   The new SSCT DD statement should be the same in each of these jobs but different from the previous SSCT statements that you have been using. Recycle your started tasks to begin obtaining historical data.

2. IPL your MVS system. You may code the same SSCT DD statement in your started task JCL for the OMEGAMON II non-VTAM dedicated address space that is currently in the started task JCL for OMEGAMON II for MVS and historical data interface.
Using the Dedicated Address Space

This topic describes how to use the address space that allows OMEGAMON II to run on a dedicated (non-VTAM) terminal.

Starting the dedicated OMEGAMON II address space

To start OMEGAMON II, perform the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Make sure that the local 327n device specified in the KM2DEDS command member is available. It must be online to MVS and not currently used by VTAM or any other subsystem.</td>
</tr>
<tr>
<td>2</td>
<td>From the MVS console, issue the following MVS START command: [S \ km2pdmod] where (km2pdmod) is the name of the started task for the special OMEGAMON II address space.</td>
</tr>
</tbody>
</table>
| 3    | Ensure that all required OMEGAMON II started tasks are running. If you are running OMEGAMON II in VTAM mode, these components may be running.  
  
  ETE  
  CSA Analyzer  
  historical data collector  
  Candle Subsystem  
  
  If you are not running OMEGAMON II in VTAM mode, you need to issue MVS START commands for the components listed above.  
  
  **Result:** The Candle copyright screen is displayed at the local 327n device(s) selected. |

Stopping the dedicated OMEGAMON II address space

To stop the dedicated OMEGAMON II address space, enter the appropriate commands as follows:

<table>
<thead>
<tr>
<th>If...</th>
<th>Then use...</th>
</tr>
</thead>
<tbody>
<tr>
<td>you are running dedicated OMEGAMON II in addition to OMEGAMON II in VTAM mode</td>
<td>the MVS STOP command from an MVS console: [STOP \ ccccccccc] where (cccccccc) is the started task name for OMEGAMON II non-VTAM</td>
</tr>
</tbody>
</table>
| you are not running OMEGAMON II in VTAM mode | the MVS STOP command from an MVS console for these components  
  
  ETE  
  CSA Analyzer  
  historical data collector  
  OMEGAMON II non-VTAM |
Signing on and off the dedicated address space

Refer to the OMEGAMON II for MVS User's Guide for running OMEGAMON II from a dedicated terminal.
Chapter Overview

This chapter describes how to install and run OMEGAMON in different optional processing modes.

Chapter Contents

- OMEGAMON for MVS Non-VTAM Dedicated Mode .......................... 102
- OMEGAMON for MVS VTAM Mode ........................................ 107
- OMEGAMON for MVS TSO Mode ......................................... 112
- OMEGAMON for MVS ISPF Mode ....................................... 116
OMEGAMON for MVS Non-VTAM Dedicated Mode

This topic tells you how to install and run OMEGAMON for MVS in dedicated mode.

Background about dedicated mode

In dedicated mode, OMEGAMON for MVS can report hardware and software problems so severe that they disable other mechanisms, including MVS system consoles.

Dedicated mode offers the highest OMEGAMON for MVS availability. In this mode, OMEGAMON for MVS does not rely on VTAM. Instead, OMEGAMON for MVS communicates using the execute channel program (EXCP).

If you will be using features in OMEGAMON for MVS that require the Candle Management Server (CMS), VTAM is required for dedicated mode.

Screen refresh

As a feature of dedicated mode, OMEGAMON for MVS refreshes the screen automatically every few seconds without operator intervention. The default refresh cycle is five seconds; however, you can change this interval to suit your needs.

Run page-fixed

In dedicated mode, OMEGAMON for MVS should be run page-fixed and nonswappable to provide higher availability for exception analysis. If OMEGAMON for MVS is page-fixed, it is protected from paging and swapping problems. If OMEGAMON for MVS is not page-fixed, it may be:

- swapped every cycle on a long wait, which increases swapping, and device and channel activity
- vulnerable to problems with the ASM, page or swap datasets, devices, control units, and channels
- vulnerable to unilateral or exchange swaps by the SRM

Issue the OMEGAMON IOPT command to display and customize page-fixing options. IOPT provides options for:

- setting OMEGAMON for MVS storage page-fixed in memory
- marking OMEGAMON for MVS non-swappable
- issuing DASD reserves when members are saved in RKOMPCSV

If you make changes to IOPT, be sure to save your profile using the PPRF or IPRF command. Then recycle the OMEGAMON task.
Procedure to install OMEGAMON dedicated mode

Tailor the dedicated mode startup PROC and save it in your site’s PROCLIB. To do this, complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit <code>rhilev.midlev.RKANSAM(KOMPROC)</code> and modify the parameters to suit your site. Table 12: Dedicated Mode Parameters on page 103 explains the parameters and shows their defaults.</td>
</tr>
<tr>
<td>2</td>
<td>Save KOMPROC in your site’s PROCLIB.</td>
</tr>
<tr>
<td>3</td>
<td>SMS-managed DASD users only: if SMS class is assigned to system-generated dataset names, you must exclude jobname OMEGAMON system-generated datasets from SMS control.</td>
</tr>
</tbody>
</table>

Dedicated Mode Parameters

The following table explains the dedicated mode parameters and shows their defaults.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLS</td>
<td>nnn</td>
<td>Number of columns on OMEGAMON for MVS terminal.</td>
<td>80</td>
</tr>
<tr>
<td>FSCR</td>
<td>ccccc</td>
<td>First screen space that appears when you log on to OMEGAMON for MVS.</td>
<td>OMINITZZ</td>
</tr>
<tr>
<td>LROWS</td>
<td>nnnn</td>
<td>Number of logical rows for the output area (must be between ROWS and 9999).</td>
<td>(ROWSx2)-1, unless running Cross Memory/Cross System, in which case the default is ROWS</td>
</tr>
<tr>
<td>MODE</td>
<td>cc</td>
<td>Mode of operation for OMEGAMON for MVS™ CN for dedicated mode and DI for dedicated director in Cross Memory / Cross System mode.</td>
<td>CN</td>
</tr>
<tr>
<td>PREFIX</td>
<td>ccccc</td>
<td>High level qualifier used to install OMEGAMON for MVS.</td>
<td>none</td>
</tr>
<tr>
<td>PRTY</td>
<td>nn,nn</td>
<td>OMEGAMON for MVS dispatching priority. Your ICS and IPS values might override this value.</td>
<td>15,15</td>
</tr>
<tr>
<td>REG</td>
<td>nnnnK</td>
<td>Region size in K.</td>
<td>1536K</td>
</tr>
<tr>
<td>rhilev.midlev</td>
<td>ccccc</td>
<td>The high-level qualifier of the runtime libraries at your site.</td>
<td>YYYYYY</td>
</tr>
<tr>
<td>ROWS</td>
<td>nn</td>
<td>Number of physical rows on OMEGAMON for MVS terminal.</td>
<td>24</td>
</tr>
<tr>
<td>SYS</td>
<td>cccc</td>
<td>4-character system ID to display on the top row of OMEGAMON for MVS screen. If SYS=SMF, OMEGAMON for MVS uses the SMF system ID.</td>
<td>SMF</td>
</tr>
<tr>
<td>TIM</td>
<td>nnnn</td>
<td>OMEGAMON for MVS CPU time limit.</td>
<td>1439</td>
</tr>
</tbody>
</table>
Starting OMEGAMON for MVS in dedicated mode

To start OMEGAMON for MVS in dedicated mode, complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Make sure that the terminal you specify in the U= parameter of KOMPROC is not allocated to any other application or subsystem, such as VTAM. If the terminal is allocated to VTAM, vary it inactive:  
   V NET,INACT,I,ID=uuuu |
| 2    | Confirm that the dedicated 327x is available to OMEGAMON for MVS. If it is a secondary (or spare) MVS console, first vary the device offline, then online:  
   V uuuu,OFFLINE  
   V uuuu,ONLINE 
   where uuuu is the device address. |
| 3    | On an MVS console, enter:  
   S KOMPROC |

Your installation is successful if the Candle copyright screen appears, followed by either the Main Menu or the screen you specified on the FSCR= parameter in KOMPROC.

Stopping OMEGAMON for MVS in dedicated mode

You can stop OMEGAMON in dedicated mode in any of the following ways:

- Enter the following command on the INFO-line (top line) of the screen.
  /STOP

OR

Table 12. Dedicated Mode Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIT</td>
<td>uuuu</td>
<td>Device address of OMEGAMON for MVSTerminal. If you specify uuuu, OMEGAMON for MVS ignores the CONSOLE DD statement.</td>
<td>none</td>
</tr>
<tr>
<td>USER</td>
<td>cc</td>
<td>2-character profile suffix. Indicates which OMEGAMON user profile you are using. Used prior to MVS/ESA SP 5.2.0. For MVS/ESA 5.2.0 and above, refer to the USR parameter.</td>
<td>none</td>
</tr>
<tr>
<td>USR</td>
<td>cc</td>
<td>2-character profile suffix. Indicates which OMEGAMON user profile you are using. Used for MVS/ESA 5.2.0 and above. For MVS/ESA releases prior to SP 5.2.0, refer to the USER parameter.</td>
<td>none</td>
</tr>
</tbody>
</table>
Install the following MVS MODIFY command from the operator’s console.

F KOMPROC,P uuuu

OR

Install the following MVS STOP command from the operator’s console to stop OMEGAMON and all sessions associated with it.

P KOMPROC

**Secondary dedicated terminals**

In dedicated mode, you can use a secondary terminal to display the output from a primary OMEGAMON for MVS terminal. You cannot use the secondary terminal for input. The .CN command starts and stops a secondary terminal and accepts a unit address, so that you can allocate the device interactively. You can also switch the functions of the primary and secondary terminals with .CN.

**Multiple dedicated sessions**

You can run multiple dedicated OMEGAMON for MVS terminal sessions under one address space. After you bring up the first terminal normally, additional terminals can be activated and controlled either from the operating system or from within OMEGAMON for MVS.

To start the session from the operating system, use the MVS MODIFY command with the following parameters:

F KOBROUTR,S CN,PROD=cccccccc,UNIT=uuuu

where *uuuu* specifies the address of the secondary terminal, and *cccccccc* specifies the OMEGAMON for MVS load module as follows:

- KOMMV310 (for MVS/ESA SP 3.x systems)
- KOMMV410 (for MVS/ESA SP 4.x systems)
- KOMMV510 (for MVS/ESA SP 5.x systems)

The UNIT parameter is required to start an additional session. You can also specify any of the dedicated mode parameters specified in Table 12: Dedicated Mode Parameters on page 103.

If you want to start an additional session from within OMEGAMON for MVS, use the .MFY command. It simulates the MVS MODIFY command. The following entry starts an additional session:

.MFY S CN,PROD=cccccccc,UNIT=uuuu

You can override default parameters for additional sessions by including them in the .MFY immediate command.
Security in dedicated mode - relogon feature

Security in dedicated mode differs from the other modes, since, at startup time, there is no user ID or password associated with the session. Therefore, the only security available by default is internal security. In order to utilize external security on the dedicated session, you must use the relogon feature.

The relogon feature is a function of the /PWD command (see the OMEGAMON for MVS Command Language Reference Manual for details on the /PWD command) that allows you to enter a user ID and password to the external security package from an active OMEGAMON session. This allows you to alter the security level of your session without stopping your session.

Type in the /PWD INFO-line command and your user ID as in this example:

```
/PWD user01  OMINITZZ  DED  V500/C A083 01/01/99 17:03:37
```

Press Enter and type in your external security password at the prompt.

Note the following points regarding the use of the relogon feature:

- Be sure not to mark the /PWD command as EXTERNAL=YES in the security table because, in dedicated mode, you must use /PWD to log on to external security.

- You can determine in your user exit what the default action should be when the user ID or logon password supplied is not valid. For example, you may specify the disabling of all OMEGAMON commands marked as EXTERNAL=YES, or you may specify that the session reverts to the previous user ID. The available options are explained in the sample exit routines.

- If you use the relogon feature and your password has expired, you cannot enter a new one via the /PWD command. To re-establish the expired password, you must use the external security package procedures.
OMEGAMON for MVS VTAM Mode

When you installed OMEGAMON II, the OMEGAMON for MVS VTAM mode started task was automatically installed as a member in your RKANSAM library. The name of the member is the name you specified for the started task when you configured the product using CICAT. Read the instructions in this topic if you want to set up an additional OMEGAMON for MVS VTAM mode system that can execute with different processing options, or if you want to change the options on the original OMEGAMON component.

About VTAM mode

In VTAM mode, OMEGAMON lets you run sessions from a VTAM terminal directly, without the intervention of an intermediate online application, such as TSO. Systems programmers or performance analysts can use VTAM mode to analyze MVS performance in realtime when the extra availability of dedicated mode is not required, and when TSO mode is undesirable.

In VTAM mode, VTAM controls the 3270 terminal with which you access OMEGAMON.

OMEGAMON VTAM support is provided through KOBVTAM, a VTAM application program. This application lets users log on to their own copy of OMEGAMON from any 327x terminal in the VTAM network. Of course, each session requires some additional virtual storage for buffers and work areas, but all sessions share a single copy of OMEGAMON. Consider this when you specify the REGION size on the KOBVTAM job step.

Customizing for VTAM mode

You must customize the VTAM startup procedure, save it in one of your site's system PROCLIBs, and, if necessary, make some adjustments to VTAM.
To customize for VTAM mode, complete the following steps. Since some items involve changes to VTAM system datasets, you may wish to consult your VTAM network systems programmer before you proceed.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | **Edit** `rhilev.midlev.RKANSAM(ccccccccc)` and modify the parameters to suit your site (where cccccccc is the name for the started task you specified using CICAT). Table 13: Parameters for OMEGAMON in VTAM Mode on page 109 explains the parameters and shows their defaults. You can specify most of the OMEGAMON keywords in either the PARM string in ccccccRC or in the VTAM logon DATA string. Exceptions are shown in the table. If you specify any parameter in both places, OMEGAMON uses the value in the VTAM logon DATA string. This list shows the hierarchy of parameters, starting with the lowest level.  
- **OMEGAMON comes with its own set of defaults.**
- For the ROWS parameter only, you can override the OMEGAMON defaults with values from the VTAM mode table entry.
- **PARM string values in ccccccRC override OMEGAMON defaults and values from the VTAM mode table entry.**
- LOGON DATA string parameter values override any other values. |
| 2    | Make sure that the dataset you specify on the RKOMPCSV DD statement is the same as the first dataset you specify on the RKOMPROC DD statement. |
| 3    | Make sure that the dataset you specify on the RKOMPFSV DD statement is the same as the first dataset you specify on the RKOMPROF DD statement. |
| 4    | Save ccccccRC in one of your site’s system PROCLIBs, such as SYS1.PROCLIB. |
| 5    | If you want the VTAM application ID to be available during the VTAM initialization process, define the application ID (APPLID) in SYS1.VTAMLST. You can define the application ID either in a separate member in the SYS1.VTAMLST dataset, or in the member that contains your existing application list. A separate member is more convenient for testing purposes, because you can vary the major node (member) for the application list inactive, modify it, and then vary it active again without disturbing other VTAM applications. However, if you store the application ID in a separate member in SYS1.VTAMLST, the member name you use must be different from the application name and the ACBNAME (if it is not, the ACB does not open). The application name and the ACBNAME can be the same. The following sample is found in `rhilev.midlev.RKANSAM(KOBVTAPL):`

```sql
VTAMAPPL VBUILD TYPE=APPL
OMVTAM APPL EAS=32,ACBNAME=OMVTAM
``` |
The following table describes the parameters for OMEGAMON in VTAM mode, and the defaults:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPL</td>
<td>ccccccc</td>
<td>1 to 8 character application ID that opens the VTAM ACB. Must match the ACBNAME= parameter on the application ID in SYS1.VTAMLST. You can enter it only on the PARM string for the KOBVTAM program.</td>
<td>OMTAIM</td>
</tr>
<tr>
<td>AUP</td>
<td>YES or NO</td>
<td>Specifies whether the OMEGAMON sessions are in automatic update mode.</td>
<td>NO</td>
</tr>
<tr>
<td>DATA</td>
<td>YES or NO</td>
<td>Specifies whether OMEGAMON is to use a logon DATA string. If you specify NO, OMEGAMON uses a VTAM interpret table. You can enter it only on the PARM string for the KOBVTAM program.</td>
<td>YES</td>
</tr>
<tr>
<td>DC</td>
<td>Y or N</td>
<td>Specifies whether OMEGAMON will compress the 3270 data stream before it is sent to a terminal.</td>
<td>N</td>
</tr>
<tr>
<td>FSCR</td>
<td>ccccccc</td>
<td>Changes default for all logons to VTAM. You can enter it in either the PARM string for the KOBVTAM program or the logon DATA (must be 1 to 8 characters).</td>
<td>OMINITZ</td>
</tr>
<tr>
<td>LROWS</td>
<td>nnnn</td>
<td>Number of logical rows for the output area. LROWS must be between rows and 9999, where rows is the number of physical lines on your screen. Candle recommends a minimum LROWS value of 99 for OMEGAMON II users to ensure the proper execution of screen spaces.</td>
<td>99, unless running XMF/XSF, in which case the default is rows</td>
</tr>
<tr>
<td>OM</td>
<td>KOBROUTR</td>
<td>Specifies which OMEGAMON load module VTAM should attach.</td>
<td>KOBROUTR</td>
</tr>
<tr>
<td>PROD</td>
<td>KOMMVXX</td>
<td>Product module attached by KOBROUTR.</td>
<td>KOMMVXXX</td>
</tr>
<tr>
<td>PRTCT</td>
<td>ccccccc</td>
<td>1 to 8 character password OMEGAMON uses to open the VTAM ACB. It must match the PRTCT= parameter in the VTAMLST APPL statement. You can enter it only on the PARM string for the KOBVTAM program.</td>
<td>no ACB password</td>
</tr>
<tr>
<td>PSWD</td>
<td>ccccccc</td>
<td>1 to 8 character password for users to log on to OMEGAMON in VTAM mode. If you specify it in the PARM string of the KOBVTAM program, you must also specify it in the DATA string of the VTAM logon command.</td>
<td>no logon password</td>
</tr>
<tr>
<td>rhilev.midlev</td>
<td>ccccccc</td>
<td>The high-level qualifier of the runtime libraries.</td>
<td>YYYYYY</td>
</tr>
</tbody>
</table>
Optional VTAM mode features

The following are optional features of VTAM mode:

- For automatic logons, add the LOGAPPL= parameter to an LU or TERMINAL statement in SYS1.VTAMLST.

- To start the OMEGAMON VTAM interface automatically at IPL, add a START command for the OMEGAMON VTAM interface started task procedure to SYS1.PARMLIB(COMMNDxx).

- To simplify the logon process, update your USS table(s).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWAP</td>
<td>YES or NO</td>
<td>NO specifies that OMEGAMON for MVS will mark its address space non-swappable. OMEGAMON for MVS must execute from an APF-authorized library to be non-swappable. The address space will only be marked non-swappable while at least one OMEGAMON session is executing under it. When the last session terminates, the address space is marked swappable until a new session is started.</td>
<td>NO</td>
</tr>
<tr>
<td>TIMEOUT</td>
<td>0-999</td>
<td>Specifies the maximum number of minutes that a VTAM mode session can be idle. Once a timeout value is set, any VTAM mode session that is idle for the specified number of minutes is terminated by KOBVTAM. 0 indicates that an idle session will remain idle until the user terminates it. Note that any OMEGAMON user session initiated by VTM1 is also considered to be a VTAM mode session with respect to timeout processing.</td>
<td>0</td>
</tr>
<tr>
<td>UMAX</td>
<td>01-99</td>
<td>Maximum number of users who may log on. You can enter it only on the PARM string for the KOBVTAM program.</td>
<td>10</td>
</tr>
<tr>
<td>USER</td>
<td>cc</td>
<td>2-character profile suffix. Indicates which OMEGAMON user profile you are using. Used prior to MVS/ESA SP 5.2.0. For MVS/ESA 5.2.0 and above, refer to the USR parameter.</td>
<td>none</td>
</tr>
<tr>
<td>USR</td>
<td>cc</td>
<td>2-character profile suffix. Indicates which OMEGAMON user profile you are using. Used for MVS/ESA releases prior to SP 5.2.0, refer to the USER parameter.</td>
<td>none</td>
</tr>
</tbody>
</table>

Important

If you use a logon interpret table, problems may occur because the entire logon command is passed in the logon message instead of just the upper and lowercase letters so that the interpret table does not recognize the logon command. For example, use LogoN instead of LOGON or logon.
To control who may log on to the OMEGAMON VTAM interface, use the PSWD= parameter or a VTAM session authorization exit routine. A routine might be more effective because it controls which secondary logical units may log on to the OMEGAMON VTAM application interface. To create or update a VTAM authorization exit (ISTAUCAT), refer to the appropriate VTAM systems programming or installation reference.

Your site can also provide a logon security exit routine, which requires a user to supply a password known to RACF, CA-ACF2, or CA-TOP SECRET. See one of the following chapters for more information:

- “RACF: command-level (OMEGAMON for MVS) security” on page 47
- “CA-ACF2: command-level (OMEGAMON for MVS) security” on page 53
- “CA-TOP SECRET: command-level (OMEGAMON for MVS) security” on page 58
OMEGAMON for MVS TSO Mode

In TSO mode, OMEGAMON runs as a normal TSO command on any of its supported terminals. OMEGAMON users who do not require the high availability of dedicated mode can use TSO mode to access OMEGAMON. In TSO mode, the screen does not refresh automatically; you must press Enter.

Prerequisites for installing and customizing for TSO mode

Before you can begin to customize for TSO mode, be sure that you have built and loaded a Runtime Environment (RTE) using CICAT.

Customizing for TSO mode

To customize for TSO mode, tailor the TSO mode startup CLIST and save it in one of your site’s CLIST libraries. Complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit the startup CLIST <code>rhilev.midlev.RKANSAM(KOMCLIST)</code>. If your site runs TSO/E, use member KOMCLSTE instead. KOMCLIST and KOMCLSTE are correct for both FB and VB datasets. For FB datasets, use this member as is. For VB datasets, copy it into a VB dataset and renumber it. The CLIST uses columns 9 through 72. FB and VB numbering do not affect its contents. Modify the parameters in KOMCLIST to suit your site. Table 14: Parameters for OMEGAMON in TSO Mode on page 112 explains the parameters and shows their defaults.</td>
</tr>
<tr>
<td>2</td>
<td>Save KOMCLIST in one of your site’s CLIST libraries.</td>
</tr>
<tr>
<td>3</td>
<td>Make sure your TSO region size is at least 1.5 M.</td>
</tr>
</tbody>
</table>

TSO mode parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLS</td>
<td><code>nnn</code></td>
<td>Number of columns on the OMEGAMON terminal.</td>
<td>Terminal size</td>
</tr>
<tr>
<td>DEBUG</td>
<td>Indicates debug mode.</td>
<td>If you specify this parameter, you can watch the execution of each line of the CLIST.</td>
<td>Not specified</td>
</tr>
<tr>
<td>FSCR</td>
<td><code>cccccccc</code></td>
<td>First screen space that appears when you log on to OMEGAMON.</td>
<td>OMINITZZ</td>
</tr>
</tbody>
</table>
Authorizing OMEGAMON for MVS libraries for TSO and ISPF modes

The load library you specify in the CALL statement of OMEGAMON for MVS must be APF-authorized or part of the linklist concatenation.

As a rule, any program CALLeD via TSO is not APF-authorized, regardless of what library it comes from or its authorization code. To allow OMEGAMON for MVS to retain APF-authorization when you invoke it, you must put KOBROUTR and KOBSPFAU in the TSO authorized call tables CSECT IKJEFT02 (for example, see Figure 2 on page 114 which shows how to enable TSO to call IEBCOPY, KOBROUTR, and KOBSPFAU). Before Release 2.1 of TSO/E, the module name is IKJEFT02. Before Release 4 of TSO/E, the module name is IKJTABLS. For details on this procedure, see the appropriate IBM documentation.

Table 14. Parameters for OMEGAMON in TSO Mode

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>LROWS</td>
<td>nnnn</td>
<td>Number of logical rows for the output area. LROWS must be between rows and 9999, where rows is the number of physical lines on your screen. Candle recommends a minimum LROWS value of 99 for OMEGAMON II users to ensure the proper execution of screen spaces.</td>
<td>99, unless running XMF/XSF, in which case the default is rows</td>
</tr>
<tr>
<td>MODE</td>
<td>cc</td>
<td>Mode of operation for OMEGAMON™ TS for TSO mode.</td>
<td>TS</td>
</tr>
<tr>
<td>PROD</td>
<td>KOMMVXXX</td>
<td>Product module attached by KOBROUTR.</td>
<td>KOMMVXXX</td>
</tr>
<tr>
<td>QUICK</td>
<td></td>
<td>OMEGAMON files are not allocated.</td>
<td>Not specified</td>
</tr>
<tr>
<td>rhilev.midlev</td>
<td>ccccccc</td>
<td>High-level qualifier for the runtime libraries.</td>
<td>YYYYYYY</td>
</tr>
<tr>
<td>ROWS</td>
<td>nn</td>
<td>Number of physical rows on the OMEGAMON terminal.</td>
<td>Terminal size</td>
</tr>
<tr>
<td>SYS</td>
<td>cccc</td>
<td>4-character system ID to display on top row of the OMEGAMON screen. If SYS=SMF, OMEGAMON uses the SMF system ID.</td>
<td>SMF</td>
</tr>
<tr>
<td>USER</td>
<td>cc</td>
<td>2-character profile suffix. Indicates which OMEGAMON user profile you are using. Used prior to MVS/ESA SP 5.2.0. For MVS/ESA 5.2.0 and above, refer to the USR parameter.</td>
<td>none</td>
</tr>
<tr>
<td>USR</td>
<td>cc</td>
<td>2-character profile suffix. Indicates which OMEGAMON user profile you are using. Used for MVS/ESA SP 5.2.0 and above. For MVS/ESA releases prior to SP 5.2.0, refer to the USER parameter.</td>
<td>none</td>
</tr>
</tbody>
</table>
If you use TSO/E Release 4, you can APF-authorize KOBROUTR and KOBSPFAU by listing them in the AUTHPGM NAME(...) parameter of member IKJTSO00 in SYS1.PARMLIB, instead of using IKJTABLS.

**FIGURE 2. Sample CSECT to Add OMEGAMON for MVS to TSO Authorized List**

```assembly
ENTRY APFPPTABL
IKJFPTB8 CSECT
  DC CL8'IKJFPTB8'
  DC CL8'8.240' Assembly Date
APPFTABL DC CL8'IEBCOPY' This line may already exist
  DC CL8'KOBROUTR'
  DC CL8'KOBSPFAU'
  DC CL8'' Null entry (end-of-table)
END
```

**Important**
Do not remove the last 8-byte entry, which marks the end of the table.

In `rhilev.midlev.RKANSAM(KOMSPFU)`, insert the name of your installation’s authorized library that contains OMEGAMON for MVS load modules, as in the following example:

```
SET &OMLIB = &STR(rhilev.midlev.RKANMOD)
```

All of the usual restrictions on authorized programs that you run under TSO apply. In particular, if you issue the CALL command as a subcommand of another (unauthorized) command such as ISPF or IPCS, OMEGAMON for MVS is not authorized.

**Starting in TSO mode**

To start OMEGAMON for MVS in TSO mode, complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log on to TSO.</td>
</tr>
<tr>
<td>2</td>
<td>Execute OMEGAMON for MVS CLIST in <code>rhilev.midlev.RKANSAM</code>.</td>
</tr>
<tr>
<td></td>
<td><code>%KOMCLIST</code></td>
</tr>
<tr>
<td></td>
<td>You can also use the TSO EXecute command, as follows:</td>
</tr>
<tr>
<td></td>
<td><code>EX KOMCLIST</code></td>
</tr>
<tr>
<td></td>
<td>Use KOMCLSTE if you are a TSO/E user.</td>
</tr>
</tbody>
</table>
Your customization is successful if the Candle Corporation copyright screen appears, followed by either the Main Menu or the screen you specified on the FSCR= parameter in KOMCLIST.

**Stopping in TSO mode**

To stop OMEGAMON for MVS in TSO mode, enter the following command on the INFO-line (top line) of the screen:

```
/STOP
```

**Modifying Virtual Terminal Pool Definitions at Installation**

If you use TSO mode and want to modify virtual terminal pool definitions, if your runtime environment (RTE) does not share libraries with other RTEs or with SMP/E, follow the instructions below:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Review comments in the following product members in dataset RKANSAM to ensure you understand the members’ contents and purpose:  
  ■ KOBVTPL  
  ■ KOBVTPLX  
  ■ KOBVT1AP |
| 2    | Define your virtual terminals and logmode names to the VTM1 program by updating member KOBVTPL in the RKANSAM dataset. |
| 3    | Assemble and link edit the KOBVTPL source to create the KOBVTPL load module using the JCL in member KOBVTPLX in the RKANSAM dataset. Load module KOBVTPL is stored in the RKANMOD dataset. |
| 4    | If you have modified the terminal definitions (either the number of terminals or their names):  
  ■ Update the VTAM node list member KOBVT1AP in the RKANSAM dataset  
  ■ Update your VTAMLST controls accordingly |
OMEGAMON for MVS ISPF Mode

In ISPF mode, OMEGAMON supports split-screen mode, which lets you switch back and forth between OMEGAMON and another ISPF application. The screen does not refresh automatically; you must press Enter. You can request basic or extended color options in ISPF mode if your terminal supports them. However, extended color support does not allow extended highlighting features, such as blinking and reverse video.

OMEGAMON for MVS ISPF mode requirements

ISPF mode requires ISPF Version 2 or above. If you want to access an authorized copy of OMEGAMON in ISPF mode, you must have TSO/E Version 1, Release 2 or above. (“Authorizing OMEGAMON for MVS libraries for TSO and ISPF modes” on page 113 describes how to authorize libraries for use in ISPF mode.) If you are using RACF external security, OMEGAMON must be APF-authorized to accommodate RACHECK processing.

Prerequisites for installing and customizing for ISPF mode

Before you can begin to customize for TSO mode, be sure that you have built and loaded a Runtime Environment (RTE) using CICAT.

OMEGAMON ISPF mode components

The following list describes the components Candle ships for ISPF mode:

Load modules:

- **KOBSPF**: The main driver program that links to OMEGAMON.
- **KOBSPFAU**: Used for program authorization.
- **KOBSPFSW**: Also used for program authorization.

CLIST:

- **KOMSPF**: Establishes OMEGAMON as an ISPF application and displays the KOMSPF screen.
- **KOMSPFU**: Allocates the needed files and loads OMEGAMON.

Panels:

- **KOMSPF01**: The main display panel on which OMEGAMON appears.
- **KOMSPF02**: The KOMSPF invocation menu.
- **KOMSPF03**: Called from the KOMSPF invocation menu, the panel defines the function keys for splitting and swapping screens.
Installing OMEGAMON for MVS in ISPF Mode

To install OMEGAMON in ISPF mode, complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Copy the KOMSPF and KOMSPFU CLISTs from rhilev.midlev.RKANSAM to the CLIST library and include them in the SYSPROC concatenation.</td>
</tr>
<tr>
<td>2</td>
<td>Edit and update KOMSPFU with the high-level qualifier you are using for OMEGAMON datasets.</td>
</tr>
<tr>
<td>3</td>
<td>If you want to access an unauthorized copy of OMEGAMON, set the OMDSNAU variable to a single blank.</td>
</tr>
<tr>
<td>4</td>
<td>Copy the following panels from thilev.TKANISP to the ISPF panel library: KOMSPF01, KOMSPF02, KOMSPF03, and KOMSPF04</td>
</tr>
<tr>
<td>5</td>
<td>(Optional) Using rhilev.RKANISP(KOMISR@P) as a model, modify the ISPF Primary Option Menu to invoke OMEGAMON.</td>
</tr>
<tr>
<td>6</td>
<td>Make sure your TSO region is at least 1.5 M.</td>
</tr>
</tbody>
</table>

Starting OMEGAMON for MVS in ISPF Mode

To start OMEGAMON for MVS in ISPF mode, complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log on to TSO.</td>
</tr>
<tr>
<td>2</td>
<td>If you modified the ISPF primary options menu to include OMEGAMON for MVS, select that option and press Enter. Otherwise, execute the KOMSPF CLIST from ISPF OPTION 6, as follows: %KOMSPF The following screen appears:</td>
</tr>
</tbody>
</table>

```
----------------------- KOMSPF - INVOCATION MENU---------------------
OPTION ==> _
1 ALLOCATE - ALLOCATE OMEGAMON DATASETS
2 ASSIGN KEYS - ASSIGN SPLIT-SWAP PFK
3 BEGIN - BEGIN PRODUCT EXECUTION
X EXIT - EXIT THIS SCREEN

FOR OPTION 3, SPECIFY:
USER SUFFIX ===> nn
LROWS ===> nn (24 - 9999)
FIRST SCREEN==> |
```
Your customization is successful if the Candle Corporation copyright screen appears, followed by either the Main Menu or the screen you specified in the FIRST SCREEN field on the KOMSPF Invocation Menu.

**Stopping OMEGAMON for MVS in ISPF mode**

To stop OMEGAMON for MVS in ISPF mode, complete the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Enter the following command on the INFO-line (top line) of the screen to return to the KOMSPF invocation menu:  
/STOP |
| 2    | Select option X to return to ISPF. |
Modifying Virtual Terminal Pool Definitions at Installation

If you use ISPF mode and want to modify virtual terminal pool definitions, if your runtime environment (RTE) does not share libraries with other RTEs or with SMP/E, follow the instructions below:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Review comments in the following product members in dataset RKANSAM to ensure you understand the members’ contents and purpose:  
  - KOBVTPL  
  - KOBVTPLX  
  - KOBVT1AP |
| 2    | Define your virtual terminals and logmode names to the VTM1 program by updating member KOBVTPL in the RKANSAM dataset. |
| 3    | Assemble and link edit the KOBVTPL source to create the KOBVTPL load module using the JCL in member KOBVTPLX in the RKANSAM dataset. Load module KOBVTPL is stored in the RKANMOD dataset. |
| 4    | If you have modified the terminal definitions (either the number of terminals or their names):  
  - Update the VTAM node list member KOBVT1AP in the RKANSAM dataset  
  - Update your VTAMLST controls accordingly |
Chapter Overview

This chapter describes how to run the historical reporter in ISPF mode and in TSO full-screen mode, and how to set up historical reporting in batch mode.

Chapter Contents

Running the EPILOG Historical Reporter in ISPF Mode ............... 122
Running the EPILOG Historical Reporter in TSO Full-Screen Mode .... 123
Setting up EPILOG Historical Reporting for Batch .................... 124
Running the EPILOG Historical Reporter in ISPF Mode

This topic describes the procedure for running the Historical Reporter in ISPF mode.

Procedure

Follow these steps to run the historical reporter in ISPF mode.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up two CLISTs in an appropriate command procedure library. Two sample CLISTs are provided in <code>rhilev.midlev.RKANCLI</code> members KEDSPF and KEDSPFC2. The KEDSPF CLIST is the invocation CLIST and requires no modification.</td>
</tr>
<tr>
<td>2</td>
<td>Edit the KEDSPFC2 CLIST and change the PREFIX and dataset name defaults to match the high-level qualifiers defined during the installation process. This CLIST is set to log all reporter messages to SYSOUT. In addition, the following three members contain the required panel definitions: <code>rhilev.midlev.RKANISP(KEBSPFP1)</code> <code>rhilev.midlev.RKANISP(KEBSPFP2)</code> <code>rhilev.midlev.RKANISP(KEBSPFP3)</code></td>
</tr>
<tr>
<td>3</td>
<td>Copy these panels into a partitioned dataset that is defined to ISPF as a panel library (you can also use the LIBDEF service if it is supported by your ISPF version). Each ISPF mode user will be initially placed into option 0 to set their PF KEYS.</td>
</tr>
</tbody>
</table>
Running the EPILOG Historical Reporter in TSO Full-Screen Mode

This topic describes the procedure for running the Historical Reporter in TSO full-screen mode.

Procedure

Follow these steps to run the historical reporter in TSO full-screen mode.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up CLISTs in an appropriate command procedure library to run the reporter in TSO full-screen mode and the SAS® interface and the sequential data extraction facility online under TSO. Three sample CLISTs are provided for that purpose. A sample CLIST for running the reporter in TSO full-screen mode is provided in <code>rhilev.midlev.RKANCLI(KEPTSO)</code>. A sample CLIST for running the SAS interface is provided in <code>rhilev.midlev.RKANCLI(KEPPMTSO)</code>. A sample CLIST for running the sequential data extraction facility with the OBTAIN command is provided in <code>rhilev.midlev.RKANCLI(KEPOBTC)</code>. See the CLIST’s comments for more information on specifying various RKM2OUTD ddnames.</td>
</tr>
<tr>
<td>2</td>
<td>Edit these CLISTs and change the PREFIX and VSAMPREF defaults to match the high-level indexes that were specified during product installation. The KEPTSO and KEPTSOV CLISTs are set to log all reporter messages to SYSOUT.</td>
</tr>
</tbody>
</table>
Setting up EPILOG Historical Reporting for Batch

You can run the reporter, the sequential data extraction facility, and the SAS interface in batch mode.

Running the reporter in batch

To run the reporter in batch, use the sample procedure provided in `rhilev.midlev.RKANSAM(KEPPROC)`.

If you will be running the EPILOG reporter in batch mode, copy this procedure into one of your cataloged procedure libraries, such as `SYS1.PROCLIB`.

Running the SAS interface in batch

To run the SAS interface in batch, use the procedure provided in `rhilev.midlev.RKANSAM(KPMJCL6)`.

If you will be running the SAS interface in batch mode, copy this procedure into one of your cataloged procedure libraries, such as `SYS1.PROCLIB`.

Running the data extraction facility with the OBTAIN command

To run the sequential data extraction facility with the OBTAIN command, use the procedure provided in `rhilev.midlev.RKANSAM(KEPOBT)`. See the JCL's comments for more information on specifying various `RKM2OUTD dnames`.

If you will be running the OBTAIN command in batch mode, copy this procedure into one of your cataloged procedure libraries, such as `SYS1.PROCLIB`. 
Chapter Overview

The purpose of this chapter is to provide the OMEGAMON II customizer with a high-level understanding of the customization process for the product. Since you need fast path navigation to perform the instructions in the remainder of this guide, this chapter also provides the information you need to use fast path navigation.

Chapter Contents

Customization Checklist ............................................. 128
Quick Tour of the Customization Process ......................... 130
Enabling Fast Path Navigation ................................... 132
Customization Checklist

A checklist of the steps in the customization stage follows. Perform the steps in the sequence in which they are presented.

The checklist

Use the ✅ column to check off steps as you complete them.

Table 15. Customization Checklist

<table>
<thead>
<tr>
<th>✅</th>
<th>Topic</th>
<th>See Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>PREPARATION</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quick Tour of the Customization Process</td>
<td>page 130</td>
</tr>
<tr>
<td></td>
<td>Enabling Fast Path Navigation</td>
<td>page 132</td>
</tr>
<tr>
<td></td>
<td><strong>REALTIME CONTROLS</strong></td>
<td></td>
</tr>
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<td></td>
<td>Overview of the Customization Procedure</td>
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<tr>
<td></td>
<td>Using the Menu System to Customize OMEGAMON Controls</td>
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<td></td>
<td>Understanding OMEGAMON II Realtime Controls and Profiles</td>
<td>page 144</td>
</tr>
<tr>
<td></td>
<td>Identifying the Realtime Controls to Customize</td>
<td>page 146</td>
</tr>
<tr>
<td></td>
<td>Preparing to Customize OMEGAMON II Realtime Controls</td>
<td>page 148</td>
</tr>
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<td></td>
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<td><strong>HISTORICAL CONTROLS</strong></td>
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</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>Adding a Collector Filter</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td></td>
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</tbody>
</table>
Table 15. Customization Checklist

<table>
<thead>
<tr>
<th>✔</th>
<th>Topic</th>
<th>See Page</th>
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</thead>
<tbody>
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<tr>
<td></td>
<td>Controlling Access to OMEGAMON and EPILOG</td>
<td>page 215</td>
</tr>
<tr>
<td></td>
<td>Controlling Access to User Profiles</td>
<td>page 216</td>
</tr>
<tr>
<td></td>
<td>Specifying a User's Startup Profile</td>
<td>page 218</td>
</tr>
</tbody>
</table>
Quick Tour of the Customization Process

You may find it helpful to see a high-level view of the customization tasks before you begin to customize OMEGAMON II.

The order of OMEGAMON II customization tasks

The following table outlines the major stages in the process of customizing OMEGAMON II controls:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customize an existing OMEGAMON site profile or the shipped default OMEGAMON profile using OMEGAMON menu mode screens.</td>
</tr>
</tbody>
</table>
| 2    | Customize the OMEGAMON II default profile. Do one of the following:  
|      | ■ Migrate any customized OMEGAMON II controls that may already exist at your site to the OMEGAMON II default profile, DEFAULT.  
|      | ■ Migrate any customized OMEGAMON controls that may already exist at your site to the OMEGAMON II default profile, DEFAULT.  
|      | ■ Keep the OMEGAMON II default profile settings that are shipped with the product in DEFAULT. |
| 3    | Customize the current contents of DEFAULT to meet your site’s current requirements using OMEGAMON II panels. |

The order of OMEGAMON II historical customization tasks

The following table outlines the major stages in the process of customizing OMEGAMON II historical controls:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Load the historical data collector controls. Do one of the following:  
|      | ■ Load any customized historical data collector controls that may already exist at your site to make them available for customizing with OMEGAMON II panels.  
|      | ■ Load the default historical data collector controls that are shipped with OMEGAMON II to make them available for customizing with OMEGAMON II panels. |
| 2    | Customize the historical data collector controls that you loaded, using OMEGAMON II panels. |
| 3    | Activate the customized historical data collector controls by migrating them to the OMEGAMON II historical data collector controls member. |
| 4    | Using a text editor, customize any other collector controls that you did not already customize through the OMEGAMON II panels. |
| 5    | Prepare an automatic datastore maintenance procedure for the data collected by the historical data collector. |
OMEGAMON II components

This table describes the three OMEGAMON II components that may require external customization with a text editor. Customization instructions for these components are included in this guide.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSA Analyzer</td>
<td>The CSA Analyzer (CSAA) provides OMEGAMON II with common storage area usage data. Warnings are reflected in the CSA light on the System Status panel when either the usage or growth rate of common storage exceeds user-defined thresholds.</td>
</tr>
<tr>
<td>EPILOG for MVS</td>
<td>The EPILOG collector provides OMEGAMON II with its historical performance monitoring data. OMEGAMON II uses this data on its historical and trend displays and in the batch report generator. Throughout this document, EPILOG is used as an abbreviated form of EPILOG for IMS.</td>
</tr>
<tr>
<td>OMEGAMON for MVS</td>
<td>The OMEGAMON collector provides OMEGAMON II with much of its realtime performance monitoring data. OMEGAMON II uses this data on the OMEGAMON II System Status panel and an integrated series of display panels. Throughout this document, OMEGAMON is used as an abbreviated form of OMEGAMON for MVS.</td>
</tr>
</tbody>
</table>

Instructions for IPS vs. WLM controls

This guide presents instructions for customizing WLM (goal-mode) controls together with instructions for IPS (compatibility-mode) controls. The instructions for WLM controls are shaded for easy identification and are meaningful only on systems whose operating system level is MVS/SP 5, or above.
Enabling Fast Path Navigation

What is a fast path?

A fast path is a unique series of letters that you enter in the action bar input field to display a particular OMEGAMON II panel (or pull-down menu or pop-up window).

The alternative is to enter the letters one at a time on the intervening panels until you reach the destination panel. This, of course, takes longer because it requires more interactions with your computer system.

Do you need to enable fast paths?

This guide uses the fast path navigation technique when showing you how to access OMEGAMON II panels. Though fast path navigation is enabled by default, you may have inadvertently disabled it during a previous OMEGAMON II session. To verify that fast path navigation is enabled, examine the top line of your System Status panel. If you do not find an action bar input field to the left of the Actions choice, you need to enable fast paths.

How to enable fast paths

To set up your OMEGAMON II panels so that you can enter fast paths in the action bar input field on each panel, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Display any OMEGAMON II panel; place the cursor on the Options field, then press Enter to display the Options pull-down menu.</td>
</tr>
<tr>
<td>2</td>
<td>Enter 2 to select Preferences and display the Preferences pop-up window.</td>
</tr>
<tr>
<td>3</td>
<td>Enter on in the Mnemonics field to enable fast paths and redisplay the previous panel.</td>
</tr>
</tbody>
</table>
Chapter Overview

This chapter provides an overview of the customization process. You will need this process to customize controls to fit your site’s performance monitoring requirements.

Subsequent chapters provide details about customizing OMEGAMON controls and OMEGAMON II realtime controls.

If you are an MVS/SP 5 user, be aware that realtime and historical WLM-based performance data is available through OMEGAMON II, but is not available through OMEGAMON.

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Overview of the Customization Procedure ............................... 134
Overview of the Customization Procedure

This topic provides an outline of the realtime customization process. Depending on your site’s requirements, each step can be optional.

Outline of the process

The following table is an outline of the realtime customization process.

Table 16. Realtime Customization

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customize an existing OMEGAMON site profile or the shipped default OMEGAMON profile using OMEGAMON menu mode screens.</td>
</tr>
</tbody>
</table>
| 2    | Customize the OMEGAMON II default profile. Do one of the following:  
  - Migrate any customized OMEGAMON II controls that may already exist at your site to the OMEGAMON II default profile, DEFAULT.  
  - Migrate any customized OMEGAMON controls that may already exist at your site to the OMEGAMON II default profile, DEFAULT.  
  - Keep the OMEGAMON II default profile settings that are shipped with the product in DEFAULT. |
| 3    | Customize the current contents of DEFAULT to meet your site’s current requirements using OMEGAMON II panels. |
Chapter Overview

This topic defines OMEGAMON controls and profiles, shows how to customize the controls, and helps you plan to migrate controls to OMEGAMON II.

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Understanding OMEGAMON Profiles ...................................... 137
Planning to Customize OMEGAMON Controls ....................... 140
Using the Menu System to Customize OMEGAMON Controls .... 141
Understanding OMEGAMON Controls

What is OMEGAMON?
OMEGAMON is a command-driven performance monitor with a collector that provides OMEGAMON II with much of its realtime data.

Do you need to customize OMEGAMON controls?
If users will be zooming to OMEGAMON, and you want to define a site profile for those users, you need to customize OMEGAMON controls. You can migrate some customized controls to OMEGAMON II to be used as a basis for customizing OMEGAMON II realtime controls.

Note
If you do not need to customize OMEGAMON controls, please go directly to “Customizing OMEGAMON II Realtime Controls” on page 143

OMEGAMON and WLM-based data
MVS/SP 5 and above users should be aware that OMEGAMON displays IPS-based, compatibility mode data only. If you attempt to display data through OMEGAMON while MVS is operating in goal mode, OMEGAMON may issue a message informing you that certain fields or an entire display is not applicable in goal mode.

What are OMEGAMON controls?
OMEGAMON controls are adjustable measurements of MVS performance that alert OMEGAMON users to inadequate levels of current MVS performance. You set these controls (also known as session configuration and exception analysis options) according to your site’s performance monitoring requirements. When customizing OMEGAMON controls, you can also enable or disable specific performance measurements.

Note to MVS/SP 5 users: OMEGAMON controls adjust IPS-based performance measurements only. You can adjust WLM-based performance measurements through OMEGAMON II.
Understanding OMEGAMON Profiles

This topic provides information about OMEGAMON profiles.

What is an OMEGAMON profile?

An OMEGAMON profile is a set of controls that determines how OMEGAMON monitors the performance of an MVS system.

There are three types of OMEGAMON profiles, as shown in the following table.

<table>
<thead>
<tr>
<th>OMEGAMON Profile</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candle-supplied</td>
<td>The initial profile that lets you monitor your MVS system until you are ready to create an installation profile. You cannot change the Candle-supplied profile, but at any time you can select it as the OMEGAMON profile for your current session.</td>
</tr>
<tr>
<td>installation</td>
<td>The profile that you customized for use by all OMEGAMON users on this system. Creating the installation profile includes determining, selecting, and saving appropriate options and thresholds for your installation. The installation profile is a good startup (default) profile for all OMEGAMON users on your system.</td>
</tr>
<tr>
<td>user</td>
<td>A profile customized for one or more OMEGAMON users. Any OMEGAMON user can customize and save any number of individual profiles as OMEGAMON user profiles.</td>
</tr>
</tbody>
</table>

Selecting the OMEGAMON profile for the current session

Each OMEGAMON profile has a unique two-character suffix as shown in the following table:

<table>
<thead>
<tr>
<th>Suffix</th>
<th>OMEGAMON Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Candle-supplied</td>
</tr>
<tr>
<td>/I</td>
<td>installation</td>
</tr>
<tr>
<td></td>
<td>When you save the installation profile, OMEGAMON automatically assigns it suffix /I.</td>
</tr>
<tr>
<td>cc</td>
<td>user</td>
</tr>
<tr>
<td></td>
<td>When saving a user profile, the user assigns it a unique suffix by entering two alphanumeric characters.</td>
</tr>
</tbody>
</table>
To select the OMEGAMON profile for the current OMEGAMON II session, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From any OMEGAMON II panel, enter fast path <code>ocs</code> to display the Session Defaults pop-up window.</td>
</tr>
<tr>
<td>2</td>
<td>Select a profile by entering a two-character suffix in the Zoomed-to OMEGAMON user profile field. (This also displays the Controls pop-up window.)</td>
</tr>
<tr>
<td>3</td>
<td>Press F12 to redisplay the previous panel.</td>
</tr>
</tbody>
</table>

### Identifying the current session’s profile

Zoom to OMEGAMON by entering fast path `go` from any OMEGAMON II panel. This displays the current session’s profile suffix on the INFO-line next to the product version number as shown in the following example.

**FIGURE 3. Displaying the Profile for the Session**

In this example, the `/I` after version 750, the current OMEGAMON component release, indicates that the profile for the current session is the installation profile.

### Using the Dynamic Profile Update Facility

The Dynamic Profile Update Facility lets you dynamically import and export individual OMEGAMON II profiles to and from a partitioned dataset by creating import and export dialogs that are invoked externally through MVS.

Following are the instructions for using the import and export dialogs:

- Invoke KM2EXP and KM2IMP by using the MVS Modify command.
- Use KM2EXP to export a profile to a partitioned dataset and KM2IMP to import a profile from a partitioned dataset.
- When you export a profile, its data is written in a standard format to a partitioned dataset member.
- The partitioned dataset should be allocated as fixed blocked, LRECL of 80, and BLKSIZE of 8880, with an appropriate number of directory blocks.
- Make sure the OMEGAMON II for MVS started task name has write authority to the partitioned dataset.

- Importing reverses the above process, and recreates a profile based on the exported information.

The MVS Modify command for exporting a profile is as follows:

```
/F cccccccc,NTD KM2EXP 'PDSNAME MEMBER PROFILE'
```

where `cccccccc` is the started task name you specified for OMEGAMON II for MVS using CICAT and where `PDSNAME` is the name of the target partitioned dataset name, `MEMBER` is the target partitioned dataset member, and `PROFILE` is the source profile.

The MVS Modify command for importing a profile is as follows:

```
/F cccccccc,NTD KM2IMP 'PDSNAME MEMBER PROFILE'
```

where `cccccccc` is the started task name you specified for OMEGAMON II for MVS using CICAT, `PDSNAME` is the name of the source partitioned dataset name, `MEMBER` is the source partitioned dataset member, and `PROFILE` is the target profile.
Planning to Customize OMEGAMON Controls

Review this planning information before customizing OMEGAMON controls. Subsequent chapters will provide information on performing the customization.

Identifying the OMEGAMON controls that you can migrate

Customizing OMEGAMON controls does not affect OMEGAMON II realtime controls directly. However, you can customize OMEGAMON controls, then migrate an OMEGAMON profile to set some of the realtime controls in the OMEGAMON II default profile.

To see which controls you can migrate from an OMEGAMON profile to an OMEGAMON II default profile, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Display the OMEGAMON II Sign On Panel.</td>
</tr>
<tr>
<td>2</td>
<td>Press F11 to open the Logon Options pop-up window.</td>
</tr>
<tr>
<td>3</td>
<td>Press F1; then press F2 to see a list of realtime controls you can migrate.</td>
</tr>
</tbody>
</table>

What about the other OMEGAMON controls?

Remember, you need only customize those controls that have default settings that do not satisfy the OMEGAMON users on your system. You can run OMEGAMON with the Candle-supplied profile until you decide how you want to customize OMEGAMON controls.

For information about Candle-supplied OMEGAMON profile values, select the Candle-supplied profile for your current session, then use the OMEGAMON menu system to view the exception threshold default values.

Using an OMEGAMON installation profile from another MVS system

If your site has an existing OMEGAMON installation profile that was customized for another MVS system, you can ask your system programmer to copy that profile to any other MVS system for which you are customizing OMEGAMON II.
Using the Menu System to Customize OMEGAMON Controls

This topic describes how to customize OMEGAMON controls through the OMEGAMON menu system.

If you are an MVS/SP 5 or OS/390 user, you will be customizing controls for IPS-based performance data only, since OMEGAMON does not display WLM-based performance data. You will customize WLM-based controls in OMEGAMON II.

Customizing OMEGAMON through menus

To customize OMEGAMON controls, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From any OMEGAMON II panel, enter fast path <code>go</code> to zoom to OMEGAMON and display the OMEGAMON MAIN MENU.</td>
</tr>
<tr>
<td>2</td>
<td>Enter <code>p</code> on the INFO-line to display the Profile Maintenance and Session Controls menu. This menu is illustrated on the following page.</td>
</tr>
<tr>
<td>3</td>
<td>Enter a letter (A through L) on the INFO-line to select a menu item.</td>
</tr>
<tr>
<td>4</td>
<td>Follow the instructions on the menus and screens that OMEGAMON displays for your selected menu item. While customizing profile maintenance and session controls, follow the instructions on the menus and screens. For help on any field, place the cursor on the field and press F1. You can also see the OMEGAMON II for MVS Command Language Reference Manual for details about individual commands.</td>
</tr>
<tr>
<td>5</td>
<td>Repeat steps 3 and 4 for each menu item through which you want to customize OMEGAMON controls.</td>
</tr>
<tr>
<td>6</td>
<td>Press F22 to display the SAVE YOUR PROFILE screen.</td>
</tr>
</tbody>
</table>
Profile maintenance and session controls menu

To access the Profile Maintenance and Session Controls menu pictured below, select the Profile item from the OMEGAMON MAIN MENU. This menu guides you through the customization process.

FIGURE 4. Profile Maintenance and Session Controls Menu

You can choose as many or as few menu options as you wish while customizing your profile. Press F1 for online help on each option or consult the OMEGAMON II for MVS Command Language Reference Manual for details on individual commands.
Chapter Overview

This chapter defines OMEGAMON II realtime controls and profiles, explains how customizing these controls affects status lights on the System Status panel, and then presents the instructions you need to customize OMEGAMON II realtime controls through fast paths.

For MVS/SP 5 or OS/390 users, this chapter includes fast paths to controls for IPS-based and WLM-based performance data.

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Customizing OMEGAMON II Realtime Controls . . . . . . . . . . . . . . . . . . . . 150
Understanding OMEGAMON II Realtime Controls and Profiles

What are OMEGAMON II realtime controls?

OMEGAMON II realtime controls are adjustable measurements of MVS performance that alert OMEGAMON II users to inadequate levels of current MVS performance. You set realtime controls according to your site’s performance monitoring requirements. While customizing realtime controls, you can also enable or disable specific performance measurements.

OMEGAMON II realtime controls include:

- **Warning Thresholds**: which are levels of performance at which OMEGAMON II alerts users to possible system problems.
- **Critical Thresholds**: which are levels of performance at which OMEGAMON II alerts users to definite system problems.

What are OMEGAMON II user-interface controls?

OMEGAMON II user-interface controls let you and other users adjust the appearance of OMEGAMON II panels. Because most users want to set up their own user-interface controls, the OMEGAMON II for MVS User’s Guide explains how to modify these controls.

What is an OMEGAMON II profile?

An OMEGAMON II profile is a set of realtime controls and user-interface controls that determines how OMEGAMON II monitors the performance of an MVS system.

There are two types of OMEGAMON II profiles, as described in the following table:

<table>
<thead>
<tr>
<th>OMEGAMON II Profile</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>The default profile, DEFAULT, defines how all OMEGAMON II users can monitor your MVS system. Initially, the default profile contains Candle-supplied default values that let you monitor your MVS system until you are ready to customize the default profile.</td>
</tr>
</tbody>
</table>
| user | A user profile is a modification to the default profile. A user profile overlays the default profile so that any realtime controls set in the user profile supersede the controls in the default profile. A user with the proper authorization (or the customizer) usually creates a user profile for a particular user or user group.

When a user changes a realtime control in a user profile, all settings that appear on that pop-up window are also entered in the user profile. If a user types no changes before pressing Enter, all current settings on the pop-up window go into the user profile. These settings supersede corresponding default profile controls. All settings not entered in the user profile are read from the default profile.

While customizing a user profile, a user can reset any realtime control to the value in the current default profile by clearing its field. |
Identifying the Realtime Controls to Customize

Soon after OMEGAMON II is installed, the OMEGAMON II customizer usually does an initial customization based on the service-level requirements that apply to the site. Later, the OMEGAMON II customizer refines that first-pass customization, usually basing adjustments on the way status lights are changing color on the System Status panel.

How customizing affects status lights

Customizing OMEGAMON II realtime controls affects status lights on the System Status panel because changing a control sets a new value at which a status light changes color. Some realtime controls affect more than one status light.

FIGURE 5. System Status Panel

The figure above represents a typical System Status panel when MVS is running in compatibility mode. When MVS is running in goal mode, the All PG. and Domains lights are replaced by the Per1 TSO and Workload lights.
**Status conditions, colors, and symbols**

As shown in the following table, each status light displays a status condition through a color and/or symbol:

<table>
<thead>
<tr>
<th>Status Condition</th>
<th>Color</th>
<th>Default Symbol</th>
<th>Meaning of Status Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Green</td>
<td>------</td>
<td>No realtime control detects a problem.</td>
</tr>
<tr>
<td>Warning</td>
<td>Yellow</td>
<td>*****</td>
<td>One or more realtime controls detect a possible problem.</td>
</tr>
<tr>
<td>Critical</td>
<td>Red</td>
<td>$$$$$</td>
<td>One or more realtime controls detect a definite problem.</td>
</tr>
<tr>
<td>No data collection</td>
<td>Blue</td>
<td>(blank)</td>
<td>You have turned off data collection for this status light, or data is not available.</td>
</tr>
</tbody>
</table>

The previous illustration of a System Status panel in compatibility mode includes the following displayed status conditions:

- The Batch status light indicates a normal condition.
- The STC/APPC status light indicates a warning condition.
- The DASD status light indicates a critical condition.
- The Channels status light indicates that you have turned off its data collection, or that data is not available because RMF/API is not active.

**When to customize a realtime control**

If a System Status light displays a warning or critical condition, either:

- a realtime control has detected a system problem; or
- a realtime control is set incorrectly

If a System Status light displays a warning condition too often, or displays a warning condition too late to help you take action to avoid a critical condition, you probably need to reset a threshold.

**An example of needing to customize a realtime control**

You can customize a realtime control so that it gives you a timely warning status, thereby helping you avoid a critical status. For example, if the CPU status light consistently displays warning conditions too late to help avoid critical status conditions, the CPU-usage warning threshold is probably too high. You can lower the threshold by customizing its CPU status light realtime control.
Preparing to Customize OMEGAMON II Realtime Controls

If OMEGAMON II was customized since its installation
If you have already customized OMEGAMON II realtime controls since OMEGAMON II was installed, and you want to make additional changes to your site’s default profile, you can switch to, then customize, the default profile as explained in “Customizing OMEGAMON II Realtime Controls” on page 150.

If OMEGAMON II was not customized since its installation
If you have not customized OMEGAMON II realtime controls since OMEGAMON II was installed, choose one task from the following list and proceed to the instructions for that task on the pages that follow.

- Migrate any customized OMEGAMON II controls that may already exist at your site to the OMEGAMON II default profile, DEFAULT.
  OR
- Migrate any customized OMEGAMON controls that may already exist at your site to the OMEGAMON II default profile, DEFAULT.
  OR
- Keep the OMEGAMON II default profile settings that are shipped with the product in DEFAULT.

Migrating OMEGAMON II realtime controls
If your site has another customized OMEGAMON II, you can base your new OMEGAMON II default profile on the existing OMEGAMON II profile. To migrate an existing OMEGAMON II profile, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log on to the OMEGAMON II that contains the existing profile.</td>
</tr>
<tr>
<td>2</td>
<td>From any OMEGAMON II panel, enter fast path <code>ocpu</code> to display the Unload Profile Options pop-up window.</td>
</tr>
<tr>
<td>3</td>
<td>Follow the instructions on the pop-up window to unload realtime controls (options) from the existing OMEGAMON II profile to a dataset member. You can unload all or selected realtime controls.</td>
</tr>
<tr>
<td>4</td>
<td>Press F12 until you redisplay the previous panel.</td>
</tr>
<tr>
<td>5</td>
<td>Log on to the OMEGAMON II to which you are migrating realtime controls.</td>
</tr>
<tr>
<td>6</td>
<td>From any OMEGAMON II panel, enter fast path <code>ocpl</code> to display the Load Profile Options pop-up window.</td>
</tr>
</tbody>
</table>
Preparing to Customize OMEGAMON II Realtime Controls

Migrating an OMEGAMON installation profile

If your site has already customized OMEGAMON, you can base the new OMEGAMON II default profile on the OMEGAMON installation profile by migrating it. To start customizing a new OMEGAMON II default profile by migrating an OMEGAMON installation profile, use the following procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Follow the instructions on the pop-up window to load realtime controls from the dataset member to your new OMEGAMON II default profile. You can load all or selected realtime controls by choosing whether to replace duplicate rows.</td>
</tr>
<tr>
<td>8</td>
<td>Press F12 until you redisplay the previous panel.</td>
</tr>
</tbody>
</table>

Keeping the Candle-supplied default settings

You can keep the Candle-supplied OMEGAMON II default profile settings and use them until you know how you want to customize the OMEGAMON II realtime controls.
Customizing OMEGAMON II Realtime Controls

Switching to the default profile

To ensure that you customize the realtime controls in the site default profile rather than your user profile, switch to the default profile to make it your current profile. To switch to the default profile, follow the steps in this procedure:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From any OMEGAMON II panel, enter fast path <code>ocps</code> to display the Switch Profiles pop-up window.</td>
</tr>
<tr>
<td>2</td>
<td>Type <code>default</code>, then press Enter to switch to the default profile. This is the Candle-supplied default profile if your site has not previously customized the default profile.</td>
</tr>
<tr>
<td>3</td>
<td>Press F12 until you redisplay the previous panel.</td>
</tr>
</tbody>
</table>

Customizing realtime controls

To customize realtime controls, follow this procedure for each control. If you are an MVS/SP 5 user, use this procedure to customize realtime controls for IPS-based objects and WLM-based objects.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From any OMEGAMON II panel, enter a fast path from the table on the following page to display the first pop-up window related to the selected control.</td>
</tr>
<tr>
<td>2</td>
<td>Follow the directions on the first and any subsequent pop-up windows to customize the realtime control that you selected with the fast path. Press F1 for help information not included in this document.</td>
</tr>
<tr>
<td>3</td>
<td>Press Enter to save your changes, then press F12 until you redisplay the previous panel.</td>
</tr>
</tbody>
</table>

In the fast path table on the following page, shading is used as follows:

- Rows with light shading contain controls that are effective only on an MVS system that is running in goal mode.
- Rows with dark (cross hatched) shading contain controls that are effective only on an MVS system that is not running in goal mode.
- Rows with no shading contain controls that are effective on all MVS systems regardless of whether they are running in goal mode.
**Fast path table**

Use this table to find the fast path to a particular realtime control. If you are customizing OMEGAMON II for the first time, proceed through the tasks in the order they are presented in the table. Only users with OMEGAMON II system administrator authority can access fast paths that begin with *or*.

<table>
<thead>
<tr>
<th>To...</th>
<th>Enter fast path...</th>
<th>To affect these status light(s)...</th>
</tr>
</thead>
<tbody>
<tr>
<td>define performance groups</td>
<td>org</td>
<td>All PG.</td>
</tr>
<tr>
<td>define domains</td>
<td>ord</td>
<td>Domains</td>
</tr>
<tr>
<td>define expanded storage migration criteria</td>
<td>orc</td>
<td>Storage</td>
</tr>
<tr>
<td>specify minimum automatic refresh interval</td>
<td>ori</td>
<td>all</td>
</tr>
<tr>
<td>set all service class thresholds by goal type</td>
<td>ors</td>
<td>Workload, Per1 TSO</td>
</tr>
<tr>
<td>define datasets for INSPECT facility</td>
<td>ocd</td>
<td></td>
</tr>
<tr>
<td>select wait and swap reasons</td>
<td>ocw</td>
<td></td>
</tr>
<tr>
<td>set CPU utilization thresholds</td>
<td>otuc</td>
<td>CPU</td>
</tr>
<tr>
<td>set common storage thresholds</td>
<td>otus</td>
<td>CSA</td>
</tr>
<tr>
<td>set real storage thresholds</td>
<td>otur</td>
<td>Storage, Paging</td>
</tr>
<tr>
<td>set paging and swapping thresholds</td>
<td>otup</td>
<td>Paging</td>
</tr>
<tr>
<td>set channel path utilization thresholds</td>
<td>otuh</td>
<td>Channels</td>
</tr>
<tr>
<td>set tape thresholds</td>
<td>otut</td>
<td>Tape</td>
</tr>
<tr>
<td>set LPAR management thresholds</td>
<td>otul</td>
<td>CPU</td>
</tr>
<tr>
<td>set operator alert thresholds</td>
<td>otua</td>
<td>Operator Alerts</td>
</tr>
<tr>
<td>define DASD groups, and set group thresholds</td>
<td>otd</td>
<td>DASD, Paging</td>
</tr>
<tr>
<td>set performance group thresholds</td>
<td>otp</td>
<td>All PG., Batch, STC/APPC, TSO Host</td>
</tr>
<tr>
<td>set domain thresholds</td>
<td>otm</td>
<td>Domains</td>
</tr>
<tr>
<td>define response time groups, and set group thresholds</td>
<td>otr</td>
<td>TSO: RTA</td>
</tr>
<tr>
<td>specify critical jobs and started tasks for missing task analysis</td>
<td>otc</td>
<td>Key Task</td>
</tr>
<tr>
<td>specify critical DASD devices</td>
<td>otv</td>
<td>Key DASD</td>
</tr>
<tr>
<td>exclude enqueue names from analysis</td>
<td>ote</td>
<td>Enqueue</td>
</tr>
<tr>
<td>set service class address space thresholds</td>
<td>oti</td>
<td>Batch, STC/APPC, TSO Host</td>
</tr>
</tbody>
</table>
Changing thresholds

Use the following guidelines when changing thresholds:

<table>
<thead>
<tr>
<th>If you want to...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>disable a threshold</td>
<td>type off</td>
</tr>
<tr>
<td>reset a threshold to its</td>
<td>clear the field</td>
</tr>
<tr>
<td>current default setting</td>
<td>press F1</td>
</tr>
<tr>
<td>display help information</td>
<td>press Enter</td>
</tr>
<tr>
<td>about a threshold</td>
<td></td>
</tr>
<tr>
<td>have your threshold changes take affect</td>
<td>press Enter</td>
</tr>
</tbody>
</table>

Customizing the data collection frequency for a status light

A data collection frequency applies only to a specified light on the System Status panel. To customize the data collection frequency for a status light, use the following procedure:
Chapter Overview

Historical data enables you to explore recurring problems, analyze performance trends, access the impact of configuration changes, and do capacity planning. You can use both online and batch reports to view historical data.

This chapter is an overview of the process for customizing historical data collector controls in order to collect useful data for your site.

Chapter Contents

Overview of the Historical Customization Procedure. .......................... 154
Overview of the Historical Customization Procedure

This topic provides an overview of the process for customizing historical data controls to produce the reports you need.

Before you begin

In order to customize your historical data collector controls, you must have:

- OMEGAMON II system administrator authority
- write access to the OMEGAMON II for MVS product libraries

What are historical data collector controls?

Historical data collector controls allow you to specify the particular workloads, resources, and time periods for which you want to collect historical data on your system. These controls cover data collection for IPS-based objects and WLM-based objects.

Where does the collector write its data?

The historical data collector writes the data it collects to an EPILOG historical datastore (EDS) in the historical datastore list, which was created at installation time.

Note to MVS/SP 5and OS/390 users: The data being written to a datastore at any particular time is dependent upon the MVS mode that is in effect. When MVS is operating in compatibility mode, the historical data collector writes IPS-based data to the datastore. When MVS is operating in goal mode, the historical data collector writes WLM-based data to the datastore.

Historical customization procedure overview

The following table outlines the major steps in the historical customization process:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Load the historical data collector controls. Do one of the following:  
      | - Load any customized historical data collector controls that may already exist at your site to make them available for customizing with OMEGAMON II panels.  
      | - Load the default historical data collector controls that are shipped with OMEGAMON II to make them available for customizing with OMEGAMON II panels. |
| 2    | Customize the historical data collector controls that you loaded, using OMEGAMON II panels. |
| 3    | Activate the customized historical data collector controls by migrating them to the OMEGAMON II historical data collector controls member. |
| 4    | Using a text editor, customize any other collector controls that you did not already customize through the OMEGAMON II panels. |
Overview of the Historical Customization Procedure
Chapter Overview

You can customize a variety of historical data collector controls using OMEGAMON II panels, from directing the collector to collect performance data for a type of workload at a specific time of day, to setting the reporting periods in your historical batch reports.

For MVS/SP 5 users, this chapter includes collector controls for IPS-based and WLM-based performance data.

Chapter Contents

- Making Historical Data Collector Controls Available to Customize . . . . . 158
- Customizing Historical Data Collector Controls . . . . . . . . . . . . . . . . 159
Deciding which set of historical data collector controls to load

Before you can adjust your historical data collector controls using OMEGAMON II panels, you must load them to the OMEGAMON II historical data collector controls member. Those sites that have an existing set of historical data collector controls will usually choose to load these controls, thus saving customization time. Other sites will load the default historical data collector controls that were shipped with the OMEGAMON II product.

Making historical data collector controls available for customization

The following steps load the historical data collector controls to the OMEGAMON II historical data collector controls member to make them available for customization using OMEGAMON II panels:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From any OMEGAMON II panel, enter fast path oao to display the Load EPILOG Collector Options pop-up window.</td>
</tr>
<tr>
<td>2</td>
<td>Type the collector options dataset and member name where the historical data collector controls are located, normally rhilev.midlev.RKANPAR(KEPOPTN). This is the dataset referenced by the RKANPAR DD statement in the started task for the historical data collector. Your OMEGAMON II address space must have read authority for this file.</td>
</tr>
<tr>
<td>3</td>
<td>Press Enter to load the historical data collector controls to the OMEGAMON II historical data collector controls member and display the Historical Administrator Functions pop-up window.</td>
</tr>
</tbody>
</table>

You are now ready to begin customizing historical data collector controls.
Customizing Historical Data Collector Controls

Once you have made the historical data collector controls available to OMEGAMON II, you are ready to customize them. You can designate workloads for collection and exclude individual jobs, TSO users, or started tasks from collection.

Assigning workloads

To reach the Workload Collection Assignments pop-up window:

- **Enter fast path** `oaw` **from any OMEGAMON II panel.**

From here you can use the following table to assign workloads for historical data collection:

<table>
<thead>
<tr>
<th>If you want to collect data for specific...</th>
<th>Then enter...</th>
</tr>
</thead>
<tbody>
<tr>
<td>batch jobs</td>
<td><code>b</code></td>
</tr>
<tr>
<td>TSO users</td>
<td><code>t</code></td>
</tr>
<tr>
<td>started tasks</td>
<td><code>s</code></td>
</tr>
<tr>
<td>performance groups (for all periods)</td>
<td><code>a</code></td>
</tr>
<tr>
<td>performance groups (for first period)</td>
<td><code>f</code></td>
</tr>
<tr>
<td>performance groups (for each period)</td>
<td><code>e</code></td>
</tr>
<tr>
<td>WLM service class data</td>
<td><code>w</code></td>
</tr>
<tr>
<td>address space exclude from collection...</td>
<td><code>d</code></td>
</tr>
</tbody>
</table>

**Note:** The instructions for WLM controls are shaded and are meaningful only on systems whose operating system level is MVS/SP 5 or above and in goal mode.

Excluding workloads

Use the following steps to exclude a batch job, TSO user, or started task from historical data collection. Exclusion is helpful if you have specified generic or all workloads and want to exclude some of them.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Workload Collection Assignments pop-up window, enter <code>d</code> to display the Exclude From Collection pop-up window.</td>
</tr>
<tr>
<td>2</td>
<td>Press Enter to save your changes. You are returned to the Workload Collection Assignments pop-up window.</td>
</tr>
<tr>
<td>3</td>
<td>Press F12 to display the Historical Administrator Functions pop-up window.</td>
</tr>
</tbody>
</table>
Specifying collection time

Specify collection time for a workload using these three steps:

1. From the Historical Administrator Functions pop-up window, enter c to display the Collector Controls pop-up window.

2. From the Collector Controls pop-up window, enter t to display the Time Control for Collection pop-up window, which allows you to specify the time period during which data is to be collected for batch jobs, TSO users, WLM service classes, and so on. In each case, you can specify the days of the week, as well as the start and end time for this type of workload.

   The following table describes the workloads for which you can specify the time period during which data is to be collected.

<table>
<thead>
<tr>
<th>The Workload...</th>
<th>Includes...</th>
</tr>
</thead>
<tbody>
<tr>
<td>System-wide</td>
<td>degradation data for the entire target system. Data for all performance groups is averaged together.</td>
</tr>
<tr>
<td>Batch jobs</td>
<td>data for batch jobs.</td>
</tr>
<tr>
<td>Started tasks</td>
<td>data for started tasks.</td>
</tr>
<tr>
<td>TSO users</td>
<td>data for all TSO users.</td>
</tr>
<tr>
<td>WLM service class</td>
<td>data for all service classes as defined through the WLM.</td>
</tr>
<tr>
<td>Performance group</td>
<td>data for predefined groups for all periods within a performance group.</td>
</tr>
<tr>
<td>Performance group (first period)</td>
<td>only first period performance group data.</td>
</tr>
<tr>
<td>Resource utility</td>
<td>usage data for DASD, tape, CPU, paging, SRM, real storage, and channel activity.</td>
</tr>
</tbody>
</table>

   Note: The instructions for WLM controls are shaded and are meaningful only on systems whose operating system level is MVS/SP 5 or above and in goal mode.

3. Press Enter to save your changes. You are returned to the Collector Controls pop-up window.

Specifying collection control parameters

From the Collector Controls pop-up window, enter i to display the Collection Control Parameters pop-up window. These collector controls apply to all workload types that you have assigned for collection.

<table>
<thead>
<tr>
<th>The Parameter...</th>
<th>Specifies...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect enqueue data</td>
<td>whether to collect enqueue data. This parameter has no effect when MVS is running in goal mode.</td>
</tr>
</tbody>
</table>
Customizing Historical Data Collector Controls

<table>
<thead>
<tr>
<th>The Parameter</th>
<th>Specifies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling interval</td>
<td>how often to sample for historical data. This parameter</td>
</tr>
<tr>
<td></td>
<td>has no effect when MVS is running in goal mode.</td>
</tr>
<tr>
<td>Resource data source</td>
<td>whether the historical data collector should use RMF</td>
</tr>
<tr>
<td></td>
<td>data or an alternate as its source for resource</td>
</tr>
<tr>
<td></td>
<td>performance data.</td>
</tr>
<tr>
<td>Recording interval</td>
<td>how often data should be written to the historical data collector</td>
</tr>
<tr>
<td></td>
<td>when RMF is inactive.</td>
</tr>
</tbody>
</table>

Press Enter to save your changes. You are returned to the Collector Controls pop-up window. Press F12 to return to the Historical Administrator Functions pop-up window. (You will customize SMF and collector datastores in “Managing Datastores” on page 177.)

**Saving customized historical data collector controls**

The following steps save the historical data collector controls that you customized so they will be available to the collector:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From the Historical Administrator Functions pop-up window, enter m to display the Activate EPILOG Collector Options pop-up window.</td>
</tr>
<tr>
<td>2</td>
<td>Type the dataset name and member name where the historical collector controls are stored. The dataset name is rhilev.midlev:RKANPAR. The shipped default member name is KEPOPTN. This is the dataset referenced by the RKANPAR DD statement in the started task for the historical data collector. Your OMEGAMON II address space must have write authority for this file.</td>
</tr>
<tr>
<td>3</td>
<td>Type the dataset name and member name where the list of datastores is stored for access by the historical displays and batch reports. The dataset and member names are rhilev.midlev.RKANPAR(KEPEDS). This is the dataset referenced by the RKANPAR DD statement of the started task for historical data interface and Zoom-to-EPILOG.</td>
</tr>
<tr>
<td>4</td>
<td>Press Enter to update these collector controls. To activate these collector controls, the RKANPAR DD statements in the started task for historical data collector point to the correct historical data collector controls dataset.</td>
</tr>
<tr>
<td>5</td>
<td>Stop and then restart the started task for the historical data collector.</td>
</tr>
</tbody>
</table>

**How to provide multiple sets of controls**

If your site is running multiple collectors that require different collector options, store each set of options in a separate member. For each set of options, repeat the customization instructions on the previous pages of this chapter, with the exception of step 2 in the last procedure, Saving customized historical data collector controls. In step 2, specify a different member name for each set of controls that you customize (for example, KEPOPTN1, KEPOPTN2, and so on).
Chapter Overview

After customizing your historical data collector controls using OMEGAMON II panels, you can use a text editor to customize additional parameters that you did not already customize.

You will use two collector control statements to customize the additional parameters: OPTIONS and COLLECT. Parameters entered on the OPTIONS statement filter data written to the historical datastore and to the SMF log. Parameters entered on the COLLECT statement filter data written to the historical datastore only.

Chapter Contents

Controlling Collector Options .................................................. 164
Adding a Collector Filter ......................................................... 172
Controlling Collector Options

This topic tells you how and where to enter collector options and provides the format of the OPTIONS statement.

How and where do you enter collector options

You use a text editor to enter historical data collector options in `rhilev.midlev..RKANPAR(KEPOPTN)`. KEPOPTN is the member pointed to by default by the RKANPAR DD statement in the started task for the EPOLIG historical data collector.

The KEPOPTN member contains OPTIONS and COLLECT statements that control collector operation. The instructions on these pages show you how to enter collector options on the OPTIONS statement. The instructions in the next part of the topic show you how to enter filters using the COLLECT statement.

OPTIONS format

The syntax of the OPTIONS statement is as follows:

```
OPTIONS option1 [option2 option3...]
```

The keywords that can be substituted for `option1`, `option2`, and `option3` on the OPTIONS statement are provided in the table below:
Keywords Used with the OPTIONS Statement

The table that follows provides a description of the function provided by each keyword on the OPTIONS statement and where appropriate, provides possible values.

Keywords table

This table contains the keywords to use on the OPTIONS statement. Other keywords listed in the KEPOPTN member but not described in this table are customized using OMEGAMON II panels.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
<th>Operand</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACFIELDNO</td>
<td>Specifies which JES accounting field contains the target data.</td>
<td>0–99 (If 0, no data is collected; default = 1)</td>
</tr>
<tr>
<td>ACFN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACLength</td>
<td>Specifies how many digits of accounting data to extract.</td>
<td>1–12 (default = 1)</td>
</tr>
<tr>
<td>ACFL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACPosition</td>
<td>Specifies at what position within the batch job accounting field the target data begins.</td>
<td>1–99 (default = 1)</td>
</tr>
<tr>
<td>ACFP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALTData</td>
<td>Collects resource data when another vendor product is used instead of RMF to monitor system resources.</td>
<td></td>
</tr>
<tr>
<td>ALTd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BATCHINT</td>
<td>Specifies whether or not degradation data should be collected for batch jobs at RMF-based intervals, and how many RMF intervals comprise a collection interval.</td>
<td>ON OFF (default) 0–9</td>
</tr>
<tr>
<td>BATCHON</td>
<td>Specifies one or more batch jobs for which degradation data is to be collected. (If this keyword is not specified, data will not be collected for any batch jobs.)</td>
<td>one or more job names (accepts generic formats)</td>
</tr>
<tr>
<td>BATCHOFF</td>
<td>Turns off collection for a subgroup of the jobs specified with BATCHON.</td>
<td>one or more job names (accepts generic formats)</td>
</tr>
<tr>
<td>EDSData</td>
<td>Specifies whether the collector should write its data to an online datastore. You must specify EDSData if, on the Collection Control Parameters pop-up window, you requested that RMF supply the collector with its resource data.</td>
<td>(default = EDSData)</td>
</tr>
<tr>
<td>EDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOEDSData</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOEDSD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDSLIST</td>
<td>Specifies the EPILOG data stores that are to be used for collection. (No default)</td>
<td>a list of EDS dataset names (required)</td>
</tr>
<tr>
<td>EDSL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Keywords Used with the OPTIONS Statement

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
<th>Operand</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSSWITCH</td>
<td>Specifies the events that trigger an automatic EDS switch.</td>
<td>one (and only one) of the following: FULL (default), MONTH, DAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY</td>
</tr>
<tr>
<td>ENQDATA(n)</td>
<td>Specifies how often enqueue collection is to be done by setting the enqueue sampling interval as a multiple of the regular sampling interval (set with SAMPTIME). Since enqueue collection is relatively expensive, specifying low values, such as 1 or 2, can significantly increase CPU overhead. NOENQDATA turns off enqueue analysis entirely. ENQDATA(0) is the same as NOENQDATA. (Default = NOENQDATA)</td>
<td>0–9</td>
</tr>
<tr>
<td>LOCALID</td>
<td>Specifies the EPILOG applid used by the Candle Management Server to connect to the collector.</td>
<td></td>
</tr>
<tr>
<td>ENQNAME</td>
<td>Specifies major enqueue names for enqueue collection and reporting.</td>
<td>a list of major enqueue names</td>
</tr>
<tr>
<td>JES2TBL</td>
<td>Specifies a load module for JES2 collection or disables JES2 collection.</td>
<td>KJITB212 KJITB213 KJITB214 KJITB216 KJITB220 KJITB225 KJITB231 KJITB233 KJITB241 KJITB242 KJITB243 KJITB251 KJITB252 KJITB260 NONE</td>
</tr>
<tr>
<td>JES2</td>
<td>Specifies the length of the collection interval in minutes when RMF is not active. (default = 15)</td>
<td>1–60</td>
</tr>
<tr>
<td>INTERVAL</td>
<td>Specifies whether to collect data on HSM processing delays.</td>
<td></td>
</tr>
<tr>
<td>INTERVAL</td>
<td>This keyword is not meaningful when MVS is running in goal mode.</td>
<td></td>
</tr>
<tr>
<td>HSMDATA</td>
<td>Specifies whether to collect data on HSM processing delays.</td>
<td></td>
</tr>
<tr>
<td>HSMD</td>
<td>This keyword is not meaningful when MVS is running in goal mode.</td>
<td></td>
</tr>
<tr>
<td>NOENQDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOHSMDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOENQD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOHSMD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Keywords Used with the OPTIONS Statement

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
<th>Operand</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOOPDETECT</td>
<td>Specifies a maximum number of CPU seconds that can be used by the collector during a single sampling interval.</td>
<td>1–100 (default = 15)</td>
</tr>
<tr>
<td>MAINTPROC</td>
<td>Specifies the cataloged procedure to be started by the collector at the conclusion of a successful EDS switch.</td>
<td>1–8-character member name of a cataloged JCL procedure (required) (No default)</td>
</tr>
<tr>
<td>NOTIFY</td>
<td>Specifies the TSO users to be notified of major collection activity.</td>
<td>list of TSO user IDs (required) (No default)</td>
</tr>
<tr>
<td>PDSDATA</td>
<td>Specifies that the EPILOG started task opens connections to the HUB/PLEXHUB CMS to prepare for the collection of Sysplex data.</td>
<td>PDSDATA is the default if you specify one of these types of data.</td>
</tr>
<tr>
<td>NOPDSDATA</td>
<td>PDSDATA needs three COLLECT statements for RWLM, RXCF, and RXES.</td>
<td>• WLMPDATA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• XCFDATA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• XESDATA</td>
</tr>
<tr>
<td>PGNNUM</td>
<td>Specifies the number of performance groups for which collection is to be done. This parameter is independent of multiple period or first period data collection (PGPNUM and PRDNUM).</td>
<td>1–99 (Default=16)</td>
</tr>
<tr>
<td>PGNN</td>
<td></td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PGNOFF</td>
<td>Specifies a list of performance groups which should not be monitored. This parameter is independent of multiple period or first period data collection (PGPOFF and PRDOFF).</td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PGNF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGNON</td>
<td>Specifies a list of performance groups for which collection should be done. This parameter is independent of multiple period or first period data collection (PGPON and PRDON).</td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PGNO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keyword</td>
<td>Function</td>
<td>Operand</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>PGPNUM</td>
<td>Specifies the maximum number of performance groups for which multiple period collection should be done. This option affects only performance period collection, and is independent of all-period collection. (In other words, this keyword acts independently of the PGNUM keyword.)</td>
<td>0–25 (Default=0)</td>
</tr>
<tr>
<td>PGPN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGPOFF</td>
<td>Specifies a list of performance groups for which multiple period data should not be collected. This option only affects performance period collection, and is independent of all-period collection. (In other words, this keyword acts independently of the PGNOFF keyword.)</td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PGPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGPON</td>
<td>Specifies a list of performance groups for which multiple-period data collection should be done. This option only affects performance-period data collection, and is independent of all-period collection. However, you cannot select a performance group for multiple-period data collection and first-period data collection. (In other words, this keyword acts independently of the PGNON keyword and is mutually exclusive with the PRDON keyword.)</td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PGPO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRDNUM(n)</td>
<td>Specifies the number of performance groups for which first period collection should be done. (Default = 0). This option only affects first period collection, and is independent of all-period collection. (In other words, this keyword acts independently of the PGNUM keyword.)</td>
<td>0–25</td>
</tr>
<tr>
<td>PRDN(n)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Keywords Used with the OPTIONS Statement

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
<th>Operand</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRDOFF</td>
<td>Specifies a list of performance groups for which first period collection should be disabled. This option only affects first period collection, and is independent of multi-period or all-period collection. (In other words, this keyword acts independently of the PGPOFF and PGNOFF keywords.)</td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PRDF(n)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRDON</td>
<td>Specifies a list of performance groups for which first-period collection should be done. This option only affects first-period collection, and is independent of all-period collection. However, you cannot select a performance group for first-period collection and multiple-period collection. (In other words, this keyword acts independently of the PGNON keyword and is mutually exclusive with PGPON.)</td>
<td>one or more performance group numbers</td>
</tr>
<tr>
<td>PRDO(n)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMFDATA</td>
<td>Specifies whether or not RMF resource data should be collected.</td>
<td>(Default = RMFDATA)</td>
</tr>
<tr>
<td>RMFD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORMFDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORMFD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCLON</td>
<td>Specifies one or more report classes for data collection. RCLOFF is typically used to exclude report classes implicitly specified by RCLON.</td>
<td>one or more report class names (accepts generic formats)</td>
</tr>
<tr>
<td>RCLOFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REMOTEID</td>
<td>Specifies the Candle Management Server applid used by the EPILOG collector to connect to the CMS.</td>
<td></td>
</tr>
<tr>
<td>SAMPMIN</td>
<td>Allows user to set a minimum number of samples in a given RMF interval before it can be saved in a datastore.</td>
<td>Default=10</td>
</tr>
<tr>
<td>SAMPMIN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPTIME</td>
<td>Specifies the sampling frequency in seconds.</td>
<td>0.1–10.0 Default = 2.3</td>
</tr>
<tr>
<td>SAMP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCLON</td>
<td>Specifies one or more service classes for data collection. SCLOFF is typically used to exclude service classes implicitly specified by SCLON.</td>
<td>one or more service class names (accepts generic formats)</td>
</tr>
<tr>
<td>SCLOFF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Keywords Used with the OPTIONS Statement

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
<th>Operand</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQAMAX</td>
<td>Specifies the amount of ESQA or SQA storage (in kilobytes) to allocate</td>
<td>0–999</td>
</tr>
<tr>
<td>SQA</td>
<td>as a work area for collecting address space performance data. By default,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the collector calculates the amount of space it needs when it starts up.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Only use this keyword if you are concerned about the ESQA/SQA storage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>being used by the collector.</td>
<td></td>
</tr>
<tr>
<td>SMFDATA</td>
<td>Specifies under what circumstances collected data is to be written to</td>
<td></td>
</tr>
<tr>
<td>SMFD</td>
<td>SMF (Default = SPILLSMFDATA)</td>
<td></td>
</tr>
<tr>
<td>NOSMFDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOSMFD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPILLSMFDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPILL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMFNUM</td>
<td>Specifies the SMF record ID number to be used if SMFDATA is turned on.</td>
<td>128–255 (Default = 180)</td>
</tr>
<tr>
<td>SMFN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STCINT</td>
<td>ON OFF (default) 0–9</td>
<td>Specifies whether or not degradation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>data should be collected for started</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tasks at RMF-based intervals, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>how many RMF intervals comprise a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>collection interval.</td>
</tr>
<tr>
<td>STCON</td>
<td>Specifies one or more started tasks for which degradation data is to be</td>
<td>one or more started task names</td>
</tr>
<tr>
<td></td>
<td>collected. (If this keyword is not specified, data is not collected for</td>
<td>(accepts masks)</td>
</tr>
<tr>
<td></td>
<td>any started tasks.)</td>
<td></td>
</tr>
<tr>
<td>STCOFF</td>
<td>Turns off collection for a subgroup of the tasks specified with STCON.</td>
<td>one or more started task names</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(accepts masks)</td>
</tr>
<tr>
<td>SYSCHECK</td>
<td>Specifies whether a historical datastore may contain data for more than</td>
<td>(default = SYSCHECK)</td>
</tr>
<tr>
<td>SYSC</td>
<td>one SMF system ID. NOSYSCHECK allows the collector to write to a historical</td>
<td></td>
</tr>
<tr>
<td>NOSYSCHECK</td>
<td>datastore that already contains data for another system.</td>
<td></td>
</tr>
<tr>
<td>NOSYSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSOINT</td>
<td>Specifies whether or not degradation data should be collected for TSO</td>
<td>ON OFF (default) 0–9</td>
</tr>
<tr>
<td></td>
<td>users at RMF-based intervals, and how many RMF intervals comprise a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>collection interval.</td>
<td></td>
</tr>
</tbody>
</table>
### Keywords Used with the OPTIONS Statement

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
<th>Operand</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSOON</td>
<td>Specifies one or more TSO user IDs for which degradation data is to be collected. (If this keyword is not specified, data is not collected for any TSO sessions.)</td>
<td>one or more TSO user IDs (accepts generic formats)</td>
</tr>
<tr>
<td>TSOOFF</td>
<td>Turns off collection for a subgroup of the user IDs specified with TSOON.</td>
<td>one or more TSO user IDs (accepts generic formats)</td>
</tr>
<tr>
<td>WARNING(m)</td>
<td>Specifies the threshold in percent at which “EDS getting full” message should be issued and “next EDS status” messages should be issued. An operand of 100 suppresses the messages.</td>
<td>1–100 (Default=80)</td>
</tr>
<tr>
<td>WLMPDATA</td>
<td>Controls the collection of WLM data for the Candle Command Center for Sysplex.</td>
<td></td>
</tr>
<tr>
<td>NOWLMPDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XESDATA</td>
<td>Controls the collection of coupling facility statistics for the Candle Command Center for Sysplex.</td>
<td></td>
</tr>
<tr>
<td>NOXESDATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XCFDATA</td>
<td>Controls the collection of cross system coupling facility statistics for the Candle Command Center for Sysplex.</td>
<td></td>
</tr>
<tr>
<td>NOXCFDATA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Adding a Collector Filter

You can use a text editor to add collector filters to prevent data from being written to your historical datastore. By keeping only the most useful and important data in the datastore, you will keep your datastore maintenance to a minimum.

How do collector filters work?

Collector filters allow you to specify which records of those already selected for collection, you want the collector to write to the historical datastore. They only affect those records written to the historical datastore. Collector filters do not affect records written to SMF. You can specify that all records be written to SMF regardless of filtering. See “Managing Datastores” on page 177 for more information about SMF.

COLLECT statement

The COLLECT statement allows you to establish a set of collection filters for records already selected for collection. These filters tell the collector which records should (or should not) be written to the online historical datastore.

The syntax of the COLLECT statement is as follows:

```
COLLECT { workload | resource time-period }
```

or

```
COLLECT EXCLUDE { workload | resource: }
```

The first format filters out records for the indicated workload or resource based on a time period. Unless the record falls within the time period specified, it will be excluded.

The second format excludes all records for a specified workload or resource. You cannot enter a time period with the EXCLUDE keyword.

Examples of the COLLECT statement

The following example filters the collection of batch job degradation data by JES job class. Data will be written to the datastore for batch jobs that run between the hours of 8:00 AM and 5:00 PM only.

```
COLLECT CLS(*) STIME(8) ETIME(17)
```

The following example filters the collection of resource data to collect this data only on weekdays. The resource data for weekdays only will be written to the datastore.

```
COLLECT RALL DAY(WEEKDAY)
```
Example of the EXCLUDE keyword

The following example filters the collection of data by program name. Data will be written to the datastore for all batch jobs, started tasks, and TSO sessions except for those with names that begin with IEB.

COLLECT EXCLUDE PROGRAM(IEB*)

Conditions

When you have more than one COLLECT statement, you cause a record to be written to the historical datastore whenever that record both:

- matches at least one COLLECT statement
- does not match any other COLLECT EXCLUDE statement

Example showing how conditions interact

Consider the following example:

```
COLLECT JOB(*) STIME(8) ETIME(13)
COLLECT EXCLUDE ACCT(44224)
```

Data is collected for all jobs specified for collection, between the hours of 8 AM and 1 PM except those with account numbers of 44224.

Workload keywords for COLLECT

The following table contains the workload keywords available for use with the COLLECT statement. Other keywords listed in the KEPOPTN member but not described in the table below have already been specified using OMEGAMON II panels.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCOUNT</td>
<td>Selects batch job or TSO session degradation data by installation account code.</td>
</tr>
<tr>
<td>ACCT</td>
<td></td>
</tr>
<tr>
<td>CLASS</td>
<td>Selects batch job degradation data by JES job class.</td>
</tr>
<tr>
<td>CLS</td>
<td></td>
</tr>
<tr>
<td>PROGRAM</td>
<td>Selects batch job, started task, or TSO session degradation data by program name.</td>
</tr>
<tr>
<td>PGM</td>
<td></td>
</tr>
<tr>
<td>SYMBOLIC</td>
<td>Selects degradation data for a performance group by user-defined symbolic name.</td>
</tr>
<tr>
<td>SYM</td>
<td></td>
</tr>
</tbody>
</table>

Note: Generic formats are valid for the keyword parameters in this table. That is, asterisks (*) may be used as a wildcard character.

For more information on workload keywords, see the OMEGAMON II for MVS Command Language Reference Manual.
Resource keywords for COLLECT

The following table contains resource keywords available for use with the COLLECT statement. See the OMEGAMON II for MVS Command Language Reference Manual for more information.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RALL</td>
<td>All resource types</td>
</tr>
<tr>
<td>RCCH</td>
<td>Cache subsystem statistics</td>
</tr>
<tr>
<td>RCHN</td>
<td>Channel activity</td>
</tr>
<tr>
<td>RCPU</td>
<td>Hardware and address space CPU activity</td>
</tr>
<tr>
<td>RDAS</td>
<td>DASD device information</td>
</tr>
<tr>
<td>RDOM</td>
<td>SRM domain statistics</td>
</tr>
<tr>
<td>RINF</td>
<td>General system information (CPU model, MVS level, current WLM service policy, and so on)</td>
</tr>
<tr>
<td>RLCU</td>
<td>I/O queuing data</td>
</tr>
<tr>
<td>RPAG</td>
<td>Real and virtual storage usage with paging and swapping activity</td>
</tr>
<tr>
<td>RPDS</td>
<td>Page dataset statistics</td>
</tr>
<tr>
<td>RPGN</td>
<td>SRM performance group statistics</td>
</tr>
<tr>
<td>RSCL</td>
<td>WLM service class and report class statistics</td>
</tr>
<tr>
<td>RSDS</td>
<td>Swap dataset statistics</td>
</tr>
<tr>
<td>RSRM</td>
<td>SRM MPL settings</td>
</tr>
<tr>
<td>RSWA</td>
<td>Swap activity statistics</td>
</tr>
<tr>
<td>RSWR</td>
<td>Swap reason statistics</td>
</tr>
<tr>
<td>RVLF</td>
<td>VLF class statistics. VLF data is collected by default. Use EXCLUDE to stop collection of VLF data.</td>
</tr>
<tr>
<td>RWLM</td>
<td>WLM data. Limits the amount of Workload Manager data collected for CCC for Sysplex.</td>
</tr>
<tr>
<td>RXCF</td>
<td>Cross System coupling facilities statistics. Limits the amount of XCFDATA collected for CCC for Sysplex.</td>
</tr>
<tr>
<td>RXES</td>
<td>Coupling facilities statistics. Limits the amount of XESDATA collected for CCC for Sysplex.</td>
</tr>
</tbody>
</table>

**Note:** The instructions for WLM controls are shaded and are meaningful only on systems whose operating system level is MVS/SP 5 or above and in goal mode.
Adding a Collector Filter

**Date and time keywords for COLLECT**

The following table contains the date and time keywords available for use with the COLLECT statement for workloads. Other keywords listed in the KEPOPTN member but not described in the table below have already been specified using OMEGAMON II panels.

If you selected PDSDATA, you must also specify a time range for each of the time ranges you selected. The types of data available include:

- WLMPDATA `time-range`
- RXCFDATA `time-range`
- RXESDATA `time-range`

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAND</td>
<td>Collects data between the start and end times on the specified days. (Default value)</td>
</tr>
<tr>
<td>DAYOFWK DAY</td>
<td>Collects data only for the specified days (MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY, WEEKDAY, WEEKEND). The days used with this keyword can be abbreviated to an unambiguous short form. For example, WEDNESDAY can be shortened to W, but SATURDAY can only be shortened to SA.</td>
</tr>
<tr>
<td>ENDTIME</td>
<td>Collects data until this time of day on specified days.</td>
</tr>
<tr>
<td>RANGE</td>
<td>Collects data from the start time and date to end time and date.</td>
</tr>
<tr>
<td>STARTTIME</td>
<td>Collects data starting with this time of day on specified days.</td>
</tr>
</tbody>
</table>

For more information on date and time keywords, see the **OMEGAMON II for MVS Command Language Reference Manual**.
Adding a Collector Filter
Chapter Overview

This chapter describes the two types of datastores used by OMEGAMON II:

- Historical EPILOG datastores (EDS)
- Profile datastores (PRDS)

Subsequent chapters describe how to:

- Set up your environment for uninterrupted historical data collection
- Manage your environment for uninterrupted historical data collection
- Manually maintain the profile datastore

Chapter Contents

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Background About the Datastores. ........................................... 179
What Are the OMEGAMON II Historical EPILOG Datastores?

The historical datastores

The historical EPILOG datastores (EDS) capture resource and degradation data written to them by the historical collector. From these datastores, you can display the data online or generate batch reports.

The Profile datastore

The Profile datastore is used to store averaged samples of historical data that are derived from the historical datastores. This data can then be used with the Workload Profile Facility (WPF) to compare current performance to past performance.

MVS/SP 5 or OS/390 and the datastores

At MVS/SP 5 or OS/39 sites, the collector writes data to a historical datastore according to the MVS mode that is running. When MVS is running in compatibility mode, the collector writes IPS-based data to the datastore. When MVS is running in goal mode, the collector writes WLM-based data to the datastore.

The Profile datastore contains only IPS-based data.
Background About the Datastores

The historical collector writes the resource and degradation data it collects to a circular queue of historical datastores, where data is available for online historical displays and batch reports.

Archiving data

Writing to a datastore continues until it becomes full or a site-specified time period has elapsed. At that time, the collector starts writing to the next available datastore in the queue.

Maintenance (the archiving of data and clearing of a datastore) is normally scheduled for the datastore with the oldest data and can be done at the same time the historical collector is running. Reporting of historical data is not available while EDS maintenance is running.

How the collector uses the historical datastores

The collector selects historical datastores in the order you specify. After selecting a datastore, the collector writes to it exclusively until it becomes full, or until a site-specified trigger for a datastore switch has been reached. Writing is then switched to the next available datastore in the list. After using the last datastore in the list, the collector wraps around to the first datastore in the list.

The collector keeps a historical datastore available for recording by automatically scheduling a maintenance procedure to archive and reset the datastore with the oldest data. If there are no datastores available, the collector optionally writes to SMF so that data is not lost.

Choosing the number of datastores

There is no correct number of datastores. You determine the appropriate number based on the requirements at your site. The minimum number for automated maintenance is three. Three datastores provide:

- an active datastore where the collector is currently writing, which will be somewhere between 0% and 100% full
- the previously used datastore, which will be 100% full
- the next scheduled datastore, which will be empty and initialized, ready to be used when the current datastore becomes full

This provides a minimum of 1 full datastore of historical data and assumes that after each switch, the datastore with the oldest data is archived and reinitialized. You can then add datastores as you gain experience with the collector’s operation.
Examples based on business needs

Your data center may be asked to supply data to support some of your company’s business functions such as capacity planning, service level reporting, and system performance problem resolution. Chronological switching (monthly, weekly, or daily) is used in these cases in addition to switching based on a full status, which always occurs if the active datastore becomes full.

The following examples use chronological switching to support the business functions mentioned above:

- For capacity planning, a minimum of 3 months’ data is usually required to establish trends. The following two examples illustrate how you might store the required data:
  - Five datastores, switching monthly. Three will hold 1 month’s data each; the fourth will be the active datastore (the one currently being written to); the fifth will be available for next month.
  - Sixteen datastores, switching weekly. Fourteen will hold 1 week’s data each; the fifteenth will be the active datastore; the last will be available for next week.

- For service level reporting, a minimum of 1 month’s data is usually required for management reporting. The following example illustrates how you might store the required data:
  Seven datastores, switching weekly. Five will hold 1 week’s data each; the sixth will be the active datastore; the last will be available for next week.

- For performance problem resolution, a minimum of one week’s data is usually required to analyze and detect problems occurring in the recent past. The following example illustrates how you might store the required data:
  Nine datastores, switching daily. Seven will hold 1 day’s data each; the eighth will be the active datastore; the last will be available for tomorrow.

If all 3 functions (capacity planning, service level reporting, and performance problem resolution) are performed at your data center, 16 datastores of 1 week each should be effective and efficient.

**Note:** Chronological switching causes the collector to initiate automatic datastore switching when it detects data for a new time period (month, week, or day). However, because the historical data collector gathers data from multiple (possibly asynchronous) sources, a datastore for a specific time period might contain some data from the last RMF interval of the previous time period.
Chapter Overview

This chapter will provide you with information about the activities you need to perform to set up your environment for uninterrupted collection of historical data.

Chapter Contents

Defining the Datastores .................................................. 182
Providing Automatic Datastore Maintenance ..................... 185
Defining the Datastores

Before you begin

Before you begin to define your datastores and your environment, make sure that:

- you have OMEGAMON II system administrator authority.
- OMEGAMON II has write access to the OMEGAMON II for MVS product libraries.
- you have decided how many datastores you want to use.

Keep the following requirements in mind when adding datastores to OMEGAMON II:

- All datastores in the datastore list must have the same record size. The record size is 32,700 bytes.
- Historical datastores cannot be shared among collector Each collector’s datastore list must be unique. However, historical panels can read from any datastore list.
- If 2 collectors are running on different systems, it is not advisable to place the 2 sets of datastores on the same volume.

Setting up how and where the collector stores data

The following table explains the steps required to customize the historical data collector’s controls for uninterrupted data collection:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Make the current historical controls available to the customization panel as follows:  

- From any OMEGAMON II panel, enter fast path `oao` to display the Load EPILOG Collector Options pop-up window.  
- Type the dataset and member names where the collector controls are stored. The dataset name is `rhilev.midlev.RKANPAR`. The shipped default member name is KEPOPTN. This is the dataset referenced by the RKANPAR DD statement in the started task for the historical data collector  
- Press Enter to display the Historical Administrator Functions menu.  
- To limit the amount of data collected from the XCFDATA statement, use the COLLECT RXCF statement to specify collection periods. |
### Defining the Datastores

#### Step 2: Specify the historical collector switching parameters by doing the following:
- Enter `c` to go to the Collector Controls menu and then enter `d` to display the Datastore Switch and List pop-up window.
- Type in the event that will trigger the collector to automatically start recording on the next datastore.
  - **Note:** Even if you specify a time-triggered switch, the collector will always switch to a new datastore if the active datastore is full.
- Type in the percent full threshold. When a datastore reaches the percent full specified, the collector will start sending warning messages.
- Type in the names of datastores that will be used for collecting historical data. At least one datastore must be specified for the collector to run.
- Press Enter.
- Press F12 to return to the Collector Controls menu.

#### Step 3: Specify the TSO user IDs to be notified with collector messages.
- Enter `m` to display the Maintenance Procedure and Notify List pop-up window.
- Tab to TSO User IDs and type the TSO user IDs to be notified with collector messages.
- Press Enter to return to the Collector Controls menu.

#### Step 4: Specify when historical data is to be written to the SMF dataset and what SMF record type to use, as follows:
- Enter `i` to display the Collection Control Parameters pop-up window.
- Tab to Writing to SMF and type the criteria for writing to SMF.

<table>
<thead>
<tr>
<th>YES</th>
<th>Always write historical data to SMF, even when writing to a datastore.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>Never write historical data to SMF, even if there are no datastores available.</td>
</tr>
<tr>
<td>SPILL</td>
<td>When a datastore fills up and the collector cannot switch to another datastore, then the collector will write to SMF:</td>
</tr>
<tr>
<td></td>
<td>- Once the collector has switched to SMF-only recording, an automatic switch back to datastore recording will not occur. A manual switch or collector restart is required to resume datastore recording.</td>
</tr>
<tr>
<td></td>
<td>- If the operator does a manual switch to restart datastore recording, the collector will suspend SMF recording.</td>
</tr>
</tbody>
</table>

**Note:** Collection filters only affect those records written to a datastore. Historical data is never filtered when it is written to SMF:
- Type the SMF record number to be used for the collector’s records.
- Press Enter to return to the Collector Controls menu.
- Press F12 to return to the Historical Administrator Functions menu.
5. Save the historical collector controls as follows:
   - Enter `m` to display the Activate EPILOG Collector Options pop-up window.
   - Type the dataset and member names where the collector controls are to be stored. Use the names you entered in step 1.
   - Type the dataset and member names where the list of datastores is located for use by historical displays and batch reports. The dataset name is `rhilev.midlev.RKANPAR`. The member name is `KEPEDS`. This is the dataset referenced by the RKANPAR DD statement in the started task for the historical data interface.
   - **Note:** Although the panel allows you to store the data in any member, it must be named `KEPEDS` to be available to historical inquiries.
   - Press Enter.
   - Enter `yes` on both Message With Reply pop-ups to overwrite the original members and return to the Historical Administrator Functions menu.
   - Press F12 to return to the panel where you entered `oao`.

6. Allocate each of the new datastores specified in step 2, as follows:
   - Edit CLIST `KEPDEFEC` in `rhilev.midlev.RKANCLI` or batch job `KEPDEFEJ` in `rhilev.midlev.RKANCLI`. These members contain steps to define and initialize a new datastore.
   - Enter the new datastore name as directed in the comments section of the member.
   - Execute CLIST `KEPDEFEC` or submit job `KEPDEFEJ` to define and initialize the new datastore.

7. Make the new historical controls available to OMEGAMON II as follows:
   - Stop and restart the historical collector started task to make the new historical controls available to the collector.
   - Stop and restart the historical interface started task to make the new datastore available to the OMEGAMON II historical displays.
   - Stop and restart the zoom-to EPILOG started task to make the new datastore available to the OMEGAMON II historical reporter.
Providing Automatic Datastore Maintenance

What does automatic maintenance do?

Automatic datastore maintenance supports uninterrupted historical data collection by ensuring that there is always a datastore available to the historical data collector through an automated process.

How does automatic maintenance work?

Automatic maintenance requires that multiple datastores be allocated and then defined to the collector as an ordered list.

The example in the following table describes automatic maintenance on a system where the collector’s datastore list contains 4 datastores and automatic switching is only initiated when the current datastore becomes full.

<table>
<thead>
<tr>
<th>The Triggering Event</th>
<th>The Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>The collector starts for the first time.</td>
<td>The collector writes its data to the first datastore in the datastore list.</td>
</tr>
<tr>
<td>The <em>first</em> datastore becomes full.</td>
<td>The collector stops writing to the first datastore and starts writing to the second datastore. This process is called <em>switching</em>.</td>
</tr>
<tr>
<td>The <em>second</em> datastore becomes full.</td>
<td>The collector switches to the third datastore.</td>
</tr>
<tr>
<td>The <em>third</em> datastore becomes full.</td>
<td>The collector switches to the fourth (last) datastore in the ordered list.</td>
</tr>
<tr>
<td>The collector finishes switching to the <em>fourth</em> datastore and detects that the next (first) datastore is full.</td>
<td>The collector starts the <em>automatic maintenance procedure</em>, which archives, empties, and reinitializes the first datastore so that it can be switched to when the fourth datastore becomes full.</td>
</tr>
</tbody>
</table>

As the table illustrates, automatic maintenance is triggered for the first time when the collector switches to the fourth datastore in the list and detects that the next datastore is full. Thereafter, each switch to the next datastore causes automatic maintenance to be performed on the datastore that contains the oldest data.

Conditions that suppress automatic maintenance

OMEGAMON II will not trigger automatic maintenance when it is likely to result in the premature maintenance of a datastore. The automatic maintenance procedure will not start if any of the following conditions exist:

- The switch was manual (operator-requested).
- The switch was to SMF.
The switch was made out of sequence, that is, the collector skipped one or
more datastores in order to find an available datastore to write to.

After the switch completed, the collector could not access the next
datastore to see if it required maintenance.

Except when the switch is to SMF, the collector notifies the operator (and all
TSO users that you specified in step 3 on the “Enter m to display the
Maintenance Procedure and Notify List pop-up window.” on page 183) when
the next datastore is not available.

Required authorizations

Before you begin the process of specifying an automatic maintenance
procedure for your site, be sure that:

- you have OMEGAMON II system administrator authority and write access
to the OMEGAMON II for MVS product libraries.
- OMEGAMON II has write access to the OMEGAMON II for MVS product
libraries.
- the maintenance procedure has access to the datastore and any other
datasets that it uses.
- the KEPSTCTO program has been authorized by adding an
AUTHPGM(KEPSTCTO) statement to SYS1.PARMLIB(IKJTSOxx).
  Before you can install this authorization, you must first modify IKJTSOxx
  by supplying the appropriate suffix. Once IKJTSOxx has been modified,
you can dynamically authorize KEPSTCTO by issuing the following TSO
command under ISPF:

  PARMLIB UPDATE(xx)

  where xx is the suffix of the IKJTSOxx member in SYS1.PARMLIB.
  (Authorization of KEPSTCTO can be accomplished through an IPL
  instead of dynamically as described here, if you choose to do so.) We also
  recommend that you secure the KEPSTCTO program.

Specifying the maintenance procedure

The following table explains the steps required to provide automatic
maintenance of historical datastores:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Edit the following parameters in rhilev,midlev,RKANSAM(CANSM2HP) according to the
      instructions in the comments in the member:
      HDISTC EPZMSTC MN2PROC AUTO
      The AUTO parameter specifies the stop/restart option for the started task for the historical data
      interface and Zoom-to-EPILQS. The following describes the values that can be specified for the
      AUTO parameter: |
**BOTH**  
The maintenance procedure stops both tasks, performs maintenance on the next historical datastore, and restarts the tasks, notifying the operator of each event.

**RESTART**  
This is the default. The maintenance procedure issues a WTO message requesting that the operator stop both tasks. It then performs maintenance on the next datastore, restarts the tasks, and notifies the operator.

This option enables the operator to warn active OMEGAMON II users that historical data will be temporarily unavailable.

The maintenance procedure stops both tasks, performs maintenance on the next datastore, and notifies the operator when maintenance is complete. The operator must manually restart the tasks.

**STOP**  
The maintenance procedure notifies the operator to stop both tasks. It then performs maintenance on the next datastore, and notifies the operator when maintenance is complete. The operator must manually restart the tasks.

**NONE**  
The maintenance procedure stops both tasks, performs maintenance on the next historical datastore, and restarts the tasks, notifying the operator of each event.

---

2 Make the current historical controls available to the customization panel as follows:

- From any OMEGAMON II panel, enter fast path `oao` to display the Load EPILOG Collector Options pop-up window.
- Type the dataset and member names where the collector controls are stored. The dataset name is `rhilev.midlev.RKANPAR`. The shipped default member name is `KEPOPTN`. This is the dataset referenced by the RKANPAR DD statement in the started task for the historical data collector.
- Press Enter to return to the Historical Administrator Functions menu.

3 Identify the cataloged procedure that will be run when the historical data collector starts automatic maintenance, by doing the following:

- From the Historical Administrator Functions menu, enter `c` to go to the Collector Controls menu and then enter `m` to display the Maintenance Procedure and Notify List pop-up window.
- Type the name of the cataloged procedure. Normally the procedure `ccccccHP` is used (where `cccccc` is the 4 character applid prefix and 2 character product code you specified using CICAT). See `rhilev.midlev.RKANSAM(ccccccHP)` for a sample procedure.
- Press Enter to return to the Collector Controls pop-up window.
- Press F12 to return to the Historical Administrator Functions menu.
4. **Save the historical collector controls as follows:**
   - Enter `m` to display the Activate EPILOG Collector Options pop-up window.
   - Type the dataset and member names where the collector controls are to be stored. Use the names you entered in step 2.
   - Type the dataset and member names of the datastore list for the historical displays and batch reports. The dataset name is `rhilev.midlev.RKANPAR`. The member name is `KEPEDS`. This is the dataset referenced by the RKANPAR DD statement in the started task for the historical data interface.
     - **Note:** Although the panel allows you to store the data in any member, it must be named `KEPEDS` to be available for online historical displays and batch reports.
   - Press Enter.
   - Enter `yes` on both Message With Reply pop-ups to overwrite the original members and return to the Historical Administrator Functions menu.
   - Press F12 to return to the panel where you entered `oao`.

5. **Make the new historical controls available to OMEGAMON II by stopping and restarting the started task for historical collector.**
Chapter Overview

This chapter discusses the tasks for managing the uninterrupted historical data collection environment.

Chapter Contents

Monitoring the Status of the Datastores ........................................... 190
Adding a Datastore ................................................................. 193
Adding a Datastore without Stopping the Collector ......................... 196
Dropping a Datastore ............................................................... 198
Dropping a Datastore without Stopping the Collector ...................... 200
Switching to Another Datastore without Stopping the Collector ....... 201
Manually Starting the Maintenance Procedure .............................. 203
Recovering Data from SMF ......................................................... 204
Monitoring the Status of the Datastores

When to monitor a datastore’s status

Under ordinary circumstances, you do not need to monitor the status of a historical datastore, since the datastores in the queue are being maintained by the automatic maintenance procedure you defined in the previous section. However, there are special circumstances when you might want to monitor the status of a historical datastore.

For example, consider the following situations:

- After historical data collection begins for the first time, you may want to monitor the space utilization of your datastores to verify that you chose the correct size.
- If there is a sudden increase in activity on your system, and your datastore switching criterion is time-oriented, you may want to check that the active datastore is not becoming full prematurely.

How to monitor a datastore’s status

Enter the following MVS operator command to display the status of all the datastores in the datastore queue on the operator’s console:

```
MODIFY cccccc,STATUS
```

where cccccc is the started task name you specified for the historical data collector using CICAT.

This command generates the Collector Status Display, which includes a numbered list of the historical datastores. The number reflects the order in which they will be used by the historical data collector.

Interpreting column headers

The following table describes the column headers in the Collector Status Display:

<table>
<thead>
<tr>
<th>Column Heading</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(first column)</td>
<td>The position of the datastore in the queue.</td>
</tr>
<tr>
<td>EDS STATUS</td>
<td>The status of each datastore from the point of view of the collector. It is explained in more detail in the table below.</td>
</tr>
<tr>
<td>REASON</td>
<td>The reason that the collector switched from this datastore. It is explained in more detail under SWITCHED and UNAVAILABLE in the table below.</td>
</tr>
<tr>
<td>UTIL</td>
<td>The percentage utilization of the datastore. This value is based on the number of extents currently allocated to the datastore. This percentage value will fluctuate as new extents are allocated.</td>
</tr>
</tbody>
</table>
## Interpreting EDS STATUS

This table explains the values that can appear in the EDS STATUS column.

<table>
<thead>
<tr>
<th>EDS STATUS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVE</td>
<td>This is the datastore to which the historical data collector is currently writing.</td>
</tr>
<tr>
<td>AVAILABLE</td>
<td>This datastore is available for writing by the collector, but is not currently being used. The collector changes the status of a datastore from AVAILABLE to ACTIVE when it is selected for recording.</td>
</tr>
<tr>
<td>SWITCHED</td>
<td>The historical data collector has stopped writing to this datastore. The cause is in the REASON column of the status display and is explained below. The collector will not use this datastore again until it has been made AVAILABLE (archived and initialized).</td>
</tr>
<tr>
<td>FULL</td>
<td>The automatic switch occurred because the active datastore has run out of free space.</td>
</tr>
<tr>
<td>MONTH</td>
<td>The automatic switch occurred because you specified switching by month, and you have started a new calendar month.</td>
</tr>
<tr>
<td>DAY</td>
<td>The automatic switch occurred because you specified switching by day, and you have started a new day.</td>
</tr>
<tr>
<td>day-of-week</td>
<td>The automatic switch occurred because you specified switching by day-of-week, and you have started a new day-of-week.</td>
</tr>
<tr>
<td>MANUAL</td>
<td>The switch was done by the operator.</td>
</tr>
<tr>
<td>UNAVAILABLE</td>
<td>This datastore is not eligible for collection. The cause is in the REASON column of the status display and is explained below.</td>
</tr>
<tr>
<td>ALLOC</td>
<td>The datastore could not be allocated.</td>
</tr>
<tr>
<td>OPEN</td>
<td>The datastore could not be opened.</td>
</tr>
<tr>
<td>INVALID</td>
<td>The dataset organization, record format, key length, or record length is invalid; or the initialization record is missing.</td>
</tr>
</tbody>
</table>
Monitoring the Status of the Datastores

LRECL

The VSAM maximum record size is incompatible with that of the other datastores in the queue.

SYSCHECK

The datastore already contains data for another SYSID.
Adding a Datastore

Why add a datastore?

The number of datastores in the list can remain static for long periods of time. However, you may occasionally need to increase the number of datastores. For example, consider the following situations:

- The initial number of datastores chosen when OMEGAMON II was installed may be too low, and you may need to add a datastore as part of the customization of the product.
- Your site’s historical reporting needs may change to require that you keep historical data online for a longer period of time than is possible with the current number of datastores in the datastore list.

Datastore requirements

Keep the following requirements in mind when adding datastores to OMEGAMON II:

- All datastores in the datastore list must have the same record size. The record size is 32,700 bytes.
- Historical datastores cannot be shared among collectors. Each collector’s datastore list must be unique. However, the OMEGAMON II historical displays can read from any datastore list.
- If two collectors are running on different systems, it is not advisable to place the two sets of datastores on the same volume.

Required authorizations

Verify that you have the following authorizations before attempting the procedure that follows:

- OMEGAMON II system administrator authority
- write access to the OMEGAMON II for MVS product libraries
### How to add a datastore

This table contains the steps required to add an historical EPILOG datastore to the OMEGAMON II datastore list.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Allocate the new datastore as follows:  
  - Edit CLIST KEPDEFEC in `rhilev.midlev.RKANCLI` or batch job KEPDEFEJ in `rhilev.midlev.RKANCLI`. These members contain definition and initialization steps to allocate a new datastore.  
  - Enter the new datastore name in the definition and initialization steps as directed in the comments section of the member.  
  - Execute CLIST KEPDEFEC or submit job KEPDEFEJ to allocate the new datastore. |
| 2    | Make the current historical controls available to the customization panels as follows:  
  - From any OMEGAMON II panel, enter fast path `oao` to access the Load EPILOG Collector Options pop-up window.  
  - Type the dataset and member names where the collector controls are stored. The dataset name is `rhilev.midlev.RKANPAR`. The shipped default member name is `KEPOPTN`. This is the dataset referenced on the RKANPAR DD statement in the started task for the historical data interface.  
  - Press Enter to save the controls for access by the customization panels. This returns you to the Historical Administrator Functions menu. |
| 3    | Add the new datastore name to the OMEGAMON II datastore list as follows:  
  - From the Historical Administrator Functions menu, enter `c` to go to the Collector Controls menu, then enter `d` to access the Datastore Switch and List pop-up window.  
  - Add the full name of the new datastore, and press Enter.  
  - Press F12 twice to return to the Historical Administrator Functions menu. |
| 4    | Save the new datastore as follows:  
  - Enter `m` to access the Activate EPILOG Collector Options pop-up window.  
  - Type the dataset and member names where the collector controls will be stored. Use the names you specified in step 2.  
  - Type the dataset and member names where the list of datastores will be stored for access by the historical displays and batch reports. The dataset and member names are `rhilev.midlev.RKANPAR(KEPEDS)`. This is the dataset referenced on the RKANPAR DD statement in the started task for the historical data interface.  
  - **Note:** Although the panel allows you to store the data in any member, it must be named `KEPEDS` to be available to historical displays and batch reports.  
  - Press Enter.  
  - Enter `yes` on both Message With Reply pop-ups to overwrite the original members. This returns you to the Historical Administrator Functions menu.  
  - Press F12 to return to the original OMEGAMON II panel. |
Adding a Datastore

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 5    | Make the new datastore available to OMEGAMON II as follows:  
|      | - Stop and restart the started task for the historical data collector to make the new datastore available to the collector.  
|      | - Stop and restart the started task for the historical data interface to make the new datastore available to the OMEGAMON II historical displays. |
Adding a Datastore without Stopping the Collector

When to add a datastore without stopping the collector

Under ordinary circumstances, you will be able to run the historical collector without changing the datastore queue.

The following are some of the reasons you might want to temporarily add a datastore to the historical collector’s queue:

- You are running out of available datastores; you do not want to stop the collector to add a datastore, and you do not want to switch to SMF.
- You have determined that the next datastore to be used is too big or too small, and you want to drop it in order to add a different one.
- The queue has gotten out of sequence, and you want to do a combination of temporary drops and adds to reorder it.

This can be done without stopping the historical data collector.

Limitations

A datastore that is added with this procedure stays in the historical collector queue until it is dropped with the MODIFY command or the collector is stopped. If you want this datastore to be available to the collector the next time it is restarted, you must add it to the historical collector’s datastore list before restarting the collector, as described in “Adding a Datastore” on page 193.

Creating a new datastore

If you need to create a new datastore, do the following:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit CLIST KEPDEFEC in rhilev.midlev.RKANCLI or batch job KEPDEFEJ in rhilev.midlev.RKANCLI. These members contain definition and initialization steps to create a new datastore.</td>
</tr>
<tr>
<td>2</td>
<td>Enter the new datastore name in the definition and initialization steps, as directed in the comments section of the member.</td>
</tr>
<tr>
<td>3</td>
<td>Execute CLIST KEPDEFEC or submit job KEPDEFEJ to create the new datastore.</td>
</tr>
</tbody>
</table>

How to add a datastore without stopping the collector

To temporarily add a datastore to the historical collector’s datastore queue, enter the following MVS operator command:

**MODIFY cccccc,action**
where ccccccc is the started task name you specified for the historical data collector using CICAT.

The meaning of the command operands are as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ccccccc</td>
<td>The started task name you specified for the historical data collector using CICAT.</td>
</tr>
<tr>
<td>action</td>
<td>This parameter specifies where the collector will add the datastore in the datastore queue. The valid values are described below.</td>
</tr>
</tbody>
</table>

Values for the action parameter

The following values can be substituted for the action parameter:

<table>
<thead>
<tr>
<th>Action</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD(datastore)</td>
<td>Specifies that the datastore dataset name, identified by datastore, should be inserted into the datastore queue immediately after the active datastore. (The maximum number of datastores allowed in the queue is 999.)</td>
</tr>
<tr>
<td>ADD(datastore,n)</td>
<td>Specifies that the datastore dataset name, identified by datastore, should be inserted into the datastore queue after the datastore currently at position n, where n is a positive decimal integer representing the sequence number of a datastore already in the queue. If 0 is specified for n, the datastore will be added in front of the first datastore currently in the queue; if n exceeds the number of datastores in the queue, the datastore will be added after the last datastore in the queue. (The maximum number of datastores allowed in the queue is 999.)</td>
</tr>
</tbody>
</table>
Dropping a Datastore

Why drop a datastore?

Though the number of datastores in the datastore list can remain constant for long periods of time, you may occasionally need to reduce the number of datastores in the list. For example, consider the following situations:

- The initial number of datastores chosen when OMEGAMON II was installed may be too high, and you may need to delete a datastore as part of the customization of the product.
- Your system’s VSAM storage constraints may increase, and you may be asked to reduce the amount of historical data that you keep online.

Required authorizations

Verify that you have the following authorizations before attempting the procedure that follows:

- OMEGAMON II system administrator authority
- write access to the OMEGAMON II for MVS product libraries

How to drop a datastore

This table explains the steps required to drop a historical datastore from the OMEGAMON II datastore list.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Make the current historical controls available to the customization panels as follows:  
- From any OMEGAMON II panel, enter fast path oao to access the Load EPILOG Collector Options pop-up window.  
- Type the dataset and member names where the collector controls are stored. The dataset name is rhilev.midlev.RKANPAR. The shipped default member name is KEPOPTN.  
  This is the dataset referenced on the RKANPAR DD statement in the started task for the historical data collector.  
- Press Enter to save the controls for access by the customization panels. This returns you to the Historical Administrator Functions menu. |
| 2    | Delete the datastore name from the OMEGAMON II datastore list as follows:  
- From the Historical Administrator Functions menu, enter c to go to the Collector Controls menu, then enter :xph.d:exph to access the Datastore Switch and List pop-up window.  
- Delete the datastore name from the existing list, and press Enter.  
- Press F12 twice to return to the Historical Administrator Functions menu. |
### Dropping a Datastore

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Update the datastore lists as follows:</td>
</tr>
<tr>
<td></td>
<td>- Enter m to access the Activate EPILOG Collector Options pop-up window.</td>
</tr>
<tr>
<td></td>
<td>- Type the dataset and member names where the collector controls will be stored. Use the names you specified in step 1.</td>
</tr>
<tr>
<td></td>
<td>- Type the dataset and member name where the list of datastores will be stored for access by the historical displays and batch reports. The dataset name is rhilev.midlev.RKANPAR. The member name is KEPEDS. This is the dataset referenced on the RKANPAR DD statement in the started task for the historical data interface.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Although the panel allows you to store the data in any member, it must be named KEPEDS to be available to historical displays and batch reports.</td>
</tr>
<tr>
<td></td>
<td>- Press Enter.</td>
</tr>
<tr>
<td></td>
<td>- Enter yes on both Message With Reply pop-ups to overwrite the original members. This returns you to the Historical Administrator Functions menu.</td>
</tr>
<tr>
<td></td>
<td>- Press F12 to return to the System Status panel.</td>
</tr>
<tr>
<td>4</td>
<td>Make the new datastore lists available to OMEGAMON II as follows:</td>
</tr>
<tr>
<td></td>
<td>- Stop and restart the started task for the historical data collector to make the new datastore list available to the collector.</td>
</tr>
<tr>
<td></td>
<td>- Stop and restart the started task for the historical interface to make the new datastore list available to the OMEGAMON II historical displays.</td>
</tr>
<tr>
<td>5</td>
<td>Delete the datastore using the IDCAMS DELETE command.</td>
</tr>
</tbody>
</table>
Dropping a Datastore without Stopping the Collector

Why drop a datastore without stopping the collector

Under ordinary circumstances, you will be able to run the historical collector without changing the datastore queue.

The following are some of the reasons you might want to temporarily drop a datastore from the historical collector’s queue:

- You did a temporary add of a datastore, and you no longer need the datastore.
- You determined that the next datastore to be used is too big or too small, and you want to drop it in order to add a different one.
- The queue might have gotten out of sequence, and you want to do a combination of temporary drops and adds to reorder it.

This can be done without stopping the historical data collector.

Limitations

If this datastore was specified in the historical collector’s initial datastore list, then it will be used the next time the collector is restarted, unless you delete it from the list before restarting the collector as described in “Dropping a Datastore” on page 198.

How to drop a datastore without stopping the collector

To temporarily drop a datastore from the historical collector’s datastore queue, enter the following MVS operator command:

```
MODIFY cccccccc, DROP(n)
```

The meaning of the command operands are as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>cccccccc</td>
<td>The name of the started task for the historical data collector.</td>
</tr>
<tr>
<td>n</td>
<td>Specifies that the datastore currently at position n in the datastore queue should be removed from the queue, where n is a positive decimal integer representing the sequence number of a datastore already in the queue. The sequence numbers of the datastores already in the queue may be obtained from the Collector Status Display panel.</td>
</tr>
</tbody>
</table>
Switching to Another Datastore without Stopping the Collector

Why switch to another datastore?

There are times when you want to stop the collector from writing to the active datastore, but do not want to interfere with the data collection process. For example, if you determine that the active datastore is too small, you may want to stop writing to it immediately so you can reallocate it and make it larger. You would like to accomplish this task without stopping the collector from writing data. You can achieve your goal by switching the writing of data to another datastore according to the instructions that follow.

Considerations

When you perform a manual switch, you must also manually run the maintenance procedure against the switched datastore.

How to switch to another datastore

To switch the active historical collector datastore, enter the following MVS operator command:

```
MODIFY ,action
```

The meaning of the command operands are as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>cccccccc</td>
<td>The name of the name of the started task for the historical data collector.</td>
</tr>
<tr>
<td>action</td>
<td>This parameter specifies what action is to be taken by the collector. The valid values are described on the next page.</td>
</tr>
</tbody>
</table>

Values for action

The following are the values that may be substituted for action:

<table>
<thead>
<tr>
<th>Action</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWITCH</td>
<td>Initiates a switch to the next available datastore in the datastore queue. If no other datastore is available, the collector will decide what to do next based on the option selected in the Datastore Switch and List pop-up window:</td>
</tr>
<tr>
<td>SPILLSMF DATA</td>
<td>start writing to SMF</td>
</tr>
<tr>
<td>SMFDATA</td>
<td>continue writing to SMF</td>
</tr>
<tr>
<td>NOSMFD DATA</td>
<td>terminate</td>
</tr>
</tbody>
</table>
Switching to Another Datastore without Stopping the Collector

<table>
<thead>
<tr>
<th>Action</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWITCH(n)</td>
<td>Initiates a switch to the datastore currently in the datastore queue at position $n$, where $n$ is a positive decimal integer representing the sequence number of a datastore in the queue. The sequence numbers of the datastores in the queue may be obtained from the collector status display.</td>
</tr>
<tr>
<td>SWITCH(SMF)</td>
<td>Requests the collector to stop datastore recording and start or continue writing to SMF.</td>
</tr>
</tbody>
</table>
Manually Starting the Maintenance Procedure

Why start the maintenance procedure manually?

Under ordinary circumstances, the historical data collector will start the maintenance procedure to archive and reset the next datastore in the historical collector’s datastore queue.

The following conditions will cause the collector to switch from the current datastore without starting the maintenance procedure:

- The switch was manual (operator-requested).
- The datastore activated by the switch was selected out of sequence; that is, the collector skipped one or more datastores in order to find a datastore with the status of AVAILABLE.
- The datastore that follows the active datastore in the queue has a status other than SWITCHED.
- After the switch, the collector could not access the next datastore to see if it required maintenance.

How to manually start the maintenance procedure

To manually start the maintenance procedure, enter the following MVS operator command:

```
START cccccchp,EDSDSN='datastore',EDSVOL=volser
```

Where ccccc is the 4 character applid prefix and 2 character product code you specified using CICAT. The meaning of the command operands are as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>cccccchp</td>
<td>The member name of your maintenance procedure.</td>
</tr>
<tr>
<td>datastore</td>
<td>The dataset name of the datastore to be maintained.</td>
</tr>
<tr>
<td>volser</td>
<td>The volume serial number of the DASD volume of the datastore to be maintained.</td>
</tr>
</tbody>
</table>
Recovering Data from SMF

Why restore SMF data?

The OMEGAMON II historical detail and trend displays cannot access data from a sequential SMF file. If you need to use OMEGAMON II historical displays to analyze data that resides in an SMF file, you must first load the data to a historical datastore.

The target datastore

In the following procedure, do not identify the active datastore as your target datastore. You cannot restore data to a datastore while the collector is writing to it.

How to restore SMF data

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create a job similar to the one illustrated on the following page to extract SMF data and load selected records to a historical datastore. There is also an example job in the KEPMAINT member in the rhilev.midlev.RKANSAM data set.</td>
</tr>
</tbody>
</table>
| 2    | Modify the IFASMFDP step of your job as follows:  
- Identify the SMF input data by modifying the parameters on the SMFDATA DD statement.  
- Identify the sequential output file that will hold the SMF data by modifying the parameters on the RKM2SMF DD statement.  
- Modify the SMF record type on the SYSIN DD statement if you specified an SMF record type other than 180 for the collector’s records.  
- Modify the date selections on the SYSIN DD statement. |
| 3    | Modify the SORT step of your job as follows:  
- Modify column 7 to reflect the desired time in binary format.  
- Modify column 11 to reflect the desired date in yyddd format.  
- Modify column 15 to reflect the SYS ID. |
| 4    | Modify the KEBMAINT step of your job as follows:  
- Modify the high-level qualifiers on the STEPLIB, RKANPAR, and RKM2EDSX DD statements.  
- Identify the sequential input file that holds the SMF data on the RKM2SMF DD statement using the name you supplied in step 2.  
- Modify the LOAD statement(s) to select the SMF data to load to the historical datastore, according to the LOAD parameter table that follows in this section. |
| 5    | Submit your job to extract the SMF data and load it to a historical datastore. |
Sample job to load SMF data

This sample job reads data from an SMF archive tape and then loads the data to a historical datastore.

```
//LOAD JOB ...
//******** Extract records from SMF.
//SMF EXEC PGM=IFASMFDP
//SMFDATA DD DSN=smfdata,UNIT=TAPE,VOL=SER=vvvvvv,
// DISP=(OLD,KEEP)
//RKM2SMF DD DSN=smfwork,VOL=SER=wwwwww,
// DISP=(,CATLG),UNIT=SYSDA,SPACE=(CYL,(10,5))
//SYSPRINT DD SYSOUT=* 
//SYSIN DD *
INDD(SMFDATA,OPTIONS(DUMP))
OUTDD(RKM2SMF,TYPE(41(3),70:78,180))
DATE(99218,99218) <---- Extract only data from Aug 6
START(0000)
END(2400)
/
//******** Sort records from SMF before loading historical datastore.
//SORTSTEP EXEC PGM=SORT,REGION=3M
//SORTIN DD DSN=sortin,DISP=SHR
//SORTOUT DD DSN=sortout,DISP=(NEW,PASS,DELETE)
// UNIT=work,SPACE=(CYL,(18,9),RLSE)
//SORTWK01 DD UNIT=work,SPACE=(CYL,(1,1))
//SORTWK02 DD UNIT=work,SPACE=(CYL,(1,1))
//SORTWK03 DD UNIT=work,SPACE=(CYL,(1,1))
//SORTWK04 DD UNIT=work,SPACE=(CYL,(1,1))
//SORTWK05 DD UNIT=work,SPACE=(CYL,(1,1))
//SYSPRINT DD SYSOUT=* 
//SYSOUT DD SYSOUT=* 
//SYSIN DD *
column 7 is the time in binary format. 
column 11 is the date in yyddd format. 
column 15 is the system id.
SORT FIELDS(15,4,CH,A,11.0,4,PD,A,7,4,BI,A)
/
//******** Load records to historical datastore.
//MAINT EXEC PGM=KEBMAINT,REGION=4096K,TIME=1440,
// PARM='EPPROD=EP'
//STEPLIB DD DSN=rhilev.midlev.RKANMOD,DISP=SHR
//RKM2DSX DD DSN=rrrrrr,MVS,DISP=OLD
//RKM2SMF DD DSN=smfwork,VOL=SER=wwwwww,
// DISP=SHR,UNIT=SYSDA
//RKM2OUTM DD SYSOUT=* 
//RKM2OUTR DD SYSOUT=* 
//RKM2IN DD *
LOAD PGN(2) <---- Load only performance group 2 and
LOAD RALL <---- all resource data from Aug 6
/
```
LOAD statement syntax

The syntax of the LOAD statement is as follows:

```
LOAD {workload|resource} -
    [time-period -
    SMF(nnn) -
    SYSID(cccc) -
    DUPRECORD_INSERT|SKIP) -
    EXCLUDE]
```

LOAD statement keywords

This table describes the LOAD statement keywords.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>workload</td>
<td>The workload type to load. Valid resource types are:</td>
</tr>
<tr>
<td></td>
<td>ACCOUNT CLASS JOBNAME</td>
</tr>
<tr>
<td></td>
<td>PERFGROUP PGPERIOD PROGRAM</td>
</tr>
<tr>
<td></td>
<td>REPTCLAS SERVCLAS</td>
</tr>
<tr>
<td></td>
<td>STARTTSK SYMBOLIC SYSTEM TSOUSER</td>
</tr>
<tr>
<td></td>
<td>Workload keywords are described in detail in the OMEGAMON II for MVS Command Language Reference Manual.</td>
</tr>
<tr>
<td>resource</td>
<td>The resource type to load. Valid resource types are:</td>
</tr>
<tr>
<td></td>
<td>RALL RCCH RCHN RCPU RDAS RDOM</td>
</tr>
<tr>
<td></td>
<td>RINF RLCU RPAG RPDS RPGN RSCL</td>
</tr>
<tr>
<td></td>
<td>RSDS RSRM RSWA RSWR RVLF</td>
</tr>
<tr>
<td></td>
<td>None of these resource keywords accepts operands on the LOAD statement.</td>
</tr>
<tr>
<td></td>
<td>Resource keywords are described in detail in the OMEGAMON II for MVS Command Language Reference Manual.</td>
</tr>
<tr>
<td>time-period</td>
<td>The date-time range for the records to load. Values, in abbreviated form, are some combination of the following:</td>
</tr>
<tr>
<td>BANDIRANGE</td>
<td>BAND spans time between start time and end time of each day within the date range.</td>
</tr>
<tr>
<td></td>
<td>RANGE spans time continuously from start time of start date to end time of end date.</td>
</tr>
<tr>
<td></td>
<td>Use BAND or RANGE.</td>
</tr>
<tr>
<td>DAY(day day ...)</td>
<td>Days of week specified within parentheses.</td>
</tr>
<tr>
<td>SDATE(date) EDATE(date)</td>
<td>Start date and end date. Type dates in parentheses as mm/dd/yy or yyddd.</td>
</tr>
<tr>
<td>STIME(time) ETIME(time)</td>
<td>Start time and end time. Type times in parentheses as hh:mm:ss.</td>
</tr>
<tr>
<td>Keyword</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LMONTH LWEEK LYEAR</td>
<td>Last month, last week, or last year.</td>
</tr>
<tr>
<td>TMONTH TWEEK TYEAR</td>
<td>This month, this week, or this year.</td>
</tr>
<tr>
<td>TDAY YDAY</td>
<td>Today or yesterday.</td>
</tr>
<tr>
<td>SMF(nnn)</td>
<td>Specifies the SMF record type of the collector’s records. The default is 180 for workload degradation records.</td>
</tr>
</tbody>
</table>
| SYSID(cccc)        | Specifies the SMF system ID of the records to load. This keyword is required if input records:  
|                    | - have SMF system IDs different from the system on which you are running the job.  
|                    | - contain more than one SMF system ID.  
|                    | The SYSID of the system on which you are running the job is the default.      |
| DUPRECORD (INSERT | Prevents the job from terminating if a duplicate record is read. INSERT causes both  
| SKIP)              | records to be loaded. SKIP causes the first record to be loaded and the second to be skipped.  
|                    | Default: the job terminates.                                                 |
| EXCLUDE            | Reverses the meaning of all keywords on the LOAD statement. All data is loaded to the datastore except the data specified on the LOAD statement. |
Chapter Overview

The Workload Profile Facility (WPF) requires a datastore that occasionally requires maintenance. This datastore is called the Profile datastore.

This chapter provides the information you need to manually monitor and maintain the Profile datastore. For more details on the Workload Profile Facility, see the OMEGAMON II for MVS User’s Guide.

Chapter Contents

Monitoring the Status of a Profile Datastore .......................... 210
Maintaining a Profile Datastore ............................................. 211
Monitoring the Status of a Profile Datastore

Though the Profile datastore typically requires little maintenance, you will occasionally need to look up the usage statistics of the datastore to assure that it is not in need of maintenance. The procedure below shows you how to acquire this information.

MVS/SP 5, OS/390 and WPF

WPF gathers IPS-based performance data only. It does not gather WLM-based data when MVS is running in goal mode.

How to monitor a profile datastore

Follow these instructions to display usage statistics for a Profile datastore.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter fast path <code>ge</code> in the action bar input field on any OMEGAMON II panel. The zoomed-to EPILOG screen appears.</td>
</tr>
</tbody>
</table>
| 2 | Enter the appropriate INQUIRE command on the command line.  
**INQUIRE PRDS** provides the percentage of datastore space being used, the number of records in the datastore, and other specifications for the datastore.  
**INQUIRE PRDS SUMMARY** provides the percentage of datastore space being used and the system ID of the records in the datastore. |
| 3 | Enter `end` on the command line to return to the OMEGAMON II System Status panel. |

Using the information provided by this procedure, you can decide whether the Profile datastore requires the maintenance documented in the following topic.

Limitations of INQUIRE output

The utilization field of the INQUIRE command output contains a percentage value that is based on the number of extents currently allocated to the datastore. This percentage value will fluctuate when new extents are allocated.
Maintaining a Profile Datastore

If the percentage of space used in the Profile datastore becomes too high, you can run a job to archive the current contents, delete specified records, and reorganize the remaining contents.

How to maintain a profile datastore

Follow these steps to archive and reorganize the Profile datastore:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit member rhilev.midlev.RKANSAM(KEPUTILP). This job contains the steps UNLOAD, DEFINE, and RELOAD that result in archiving, deleting records for a specified time period, and reorganizing the Profile datastore.</td>
</tr>
<tr>
<td>2</td>
<td>In the UNLOAD step, enter the full name of the Profile datastore on the RKM2PRDS DD statement and optionally modify the name and characteristics of the tape file on the RKM2ARC DD statement.</td>
</tr>
<tr>
<td>3</td>
<td>The DEFINE step is not required if your Profile datastore is defined as REUSE. If this is the case, you can place comment characters in front of each line in this step. If your datastore is defined as NOREUSE or UNIQUE, enter the datastore, data, and index names where required on the DELETE and DEFINE commands, and the volume serial number on the CLUSTER keyword.</td>
</tr>
<tr>
<td>4</td>
<td>In the RELOAD step, enter the datastore name on the STEPLIB DD statement and other high-level qualifiers on the RKANPAR and RKM2PRDS DD statements, as directed in the comments section at the top of the job.</td>
</tr>
<tr>
<td>5</td>
<td>At the end of the RELOAD step, modify the two sample EXCLUDE statements to remove records from the time span you require. For more information on EXCLUDE command keywords, see the topic that follows.</td>
</tr>
<tr>
<td>6</td>
<td>Submit the KEPUTILP job to archive and reorganize the Profile datastore.</td>
</tr>
</tbody>
</table>

EXCLUDE command syntax

The EXCLUDE command defines, by time period, the data to be excluded from a Profile datastore. The syntax is:

```
EXCLUDE PRDS time-period
```

The following table lists the `time-period` keywords in their abbreviated form.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAND</td>
<td>Deletes data between the start time and end time of each day within the date range. Use BAND or RANGE. BAND is the default.</td>
</tr>
<tr>
<td>DAY</td>
<td>Deletes data for a specific day of the week. You can abbreviate the operand as an unambiguous short form. As shown in the following examples, you can shorten:</td>
</tr>
<tr>
<td></td>
<td>- WEDNESDAY to WED or W</td>
</tr>
<tr>
<td></td>
<td>- SATURDAY to SAT or SA</td>
</tr>
<tr>
<td>Keyword</td>
<td>Function</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>EDATE</strong></td>
<td>Specifies the end date of the time period in <em>mm/dd/yy</em> or <em>yyddd</em> format. The default is to delete data up to the most recent record in the datastore.</td>
</tr>
<tr>
<td><strong>ETIME</strong></td>
<td>Specifies the end time of the time period in 24-hour format. The default is 23:59:59.</td>
</tr>
<tr>
<td><strong>LMONTH</strong></td>
<td>Deletes last month’s data.</td>
</tr>
<tr>
<td><strong>LWEEK</strong></td>
<td>Deletes last week’s data (from Monday through Sunday).</td>
</tr>
<tr>
<td><strong>LYEAR</strong></td>
<td>Deletes last year’s data.</td>
</tr>
<tr>
<td><strong>NUMDAY</strong></td>
<td>Specifies, in days, the maximum age of any record in the datastore. For example, <strong>NUMDAY(5)</strong> excludes all records older than five days.</td>
</tr>
<tr>
<td><strong>RANGE</strong></td>
<td>Deletes data continuously from the start time of the start date to the end time of the end date.</td>
</tr>
<tr>
<td><strong>SDATE</strong></td>
<td>Specifies the start date of the time period in <em>mm/dd/yy</em> or <em>yyddd</em> format. The default is to delete data from the first record in the datastore.</td>
</tr>
<tr>
<td><strong>STIME</strong></td>
<td>Specifies the start time of the time period in 24-hour format. The default is 00:00:00.</td>
</tr>
<tr>
<td><strong>TMONTH</strong></td>
<td>Deletes this month’s data.</td>
</tr>
<tr>
<td><strong>TWEK</strong></td>
<td>Deletes this week’s data, starting from Monday.</td>
</tr>
<tr>
<td><strong>TYEAR</strong></td>
<td>Deletes this year’s data.</td>
</tr>
<tr>
<td><strong>TDAY</strong></td>
<td>Deletes today’s data.</td>
</tr>
<tr>
<td><strong>YDAY</strong></td>
<td>Deletes yesterday’s data.</td>
</tr>
</tbody>
</table>
Chapter Overview

OMEGAMON II contains features that because of their sensitivity or power are not typically made available to all users at a site. If you deny a user access to one of these sensitive features, that feature no longer appears on the user’s pull-down menu.

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Controlling Access to OMEGAMON and EPILOG. ................................. 215
Controlling Access to User Profiles ....................................................... 216
Specifying a User’s Startup Profile ......................................................... 218
Controlling System Administrator Authority

What is system administrator authority?
Several features available on OMEGAMON II panels require a special type of authorization because of their sensitive or powerful nature. This authorization is called OMEGAMON II system administrator authority.

Who has system administrator authority?
The first user to log on to OMEGAMON II after it is installed (usually the OMEGAMON II customizer) is granted system administrator authority automatically. This first system administrator can then grant system administrator authority to other OMEGAMON II users. Thereafter, each system administrator can grant and deny system administrator authority to other users.

How to grant or deny authority
Follow these steps to grant or deny system administrator authority to an OMEGAMON II user or user group. You must have system administrator authority to perform these steps.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter fast path ouu in the input field of the action bar on any OMEGAMON II panel.</td>
</tr>
<tr>
<td>2</td>
<td>Follow the instructions on the Specify User Authorities Group pop-up window to grant or deny a user (or user group) system administrator authority.</td>
</tr>
</tbody>
</table>

The next time the user or users log on to OMEGAMON II, their system administrator authority will be set to the status you entered in this procedure.
Controlling Access to OMEGAMON and EPILOG

Why control access to OMEGAMON and EPILOG?

By default, OMEGAMON II allows all users to zoom to OMEGAMON and EPILOG from the GoTo pull-down menu. As the OMEGAMON II customizer, you can revoke this authority for any of the following reasons.

- You may want to narrow the focus of certain OMEGAMON II users to the more user-friendly CUA™ panels, if their job responsibilities do not require the added facilities of the OMEGAMON and EPILOG products.
- The resources required by an excessive number of users starting up new OMEGAMON or EPILOG sessions may be having a negative impact on system performance.
- Certain preferred users at your site may be unintentionally excluded from using OMEGAMON when the maximum user setting is reached. By denying access to OMEGAMON to users who don’t need it, you help ensure OMEGAMON availability for those users who do need it.

How to grant or deny authority

Follow these steps to grant or deny authorization to use OMEGAMON and EPILOG to a user or user group. You must have system administrator authority to perform these steps.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter fast path ouu in the input field of the action bar on any OMEGAMON II panel.</td>
</tr>
<tr>
<td>2</td>
<td>Follow the instructions on the Specify User Authorities Group pop-up window to grant or deny a user or user group “zoom” authority.</td>
</tr>
</tbody>
</table>

The next time the user or users log onto OMEGAMON II, their authorization to access OMEGAMON and EPILOG is set to the status you entered in this procedure.

**Note:** If you deny a user access to OMEGAMON and EPILOG, those selections no longer appear on that user’s GoTo pull-down menu.
Controlling Access to User Profiles

What is a user profile?

A user profile is a user’s definition of how OMEGAMON II will monitor the MVS system during that user’s OMEGAMON II session. User profiles can include a set of realtime thresholds and user-interface controls that determine how OMEGAMON II will function. Any settings that were not entered in the user profile are read from the default profile, DEFAULT.

What can you control?

You have no control over a user’s ability to write to the user interface controls of the user profile. The user interface controls are reached by selecting Preferences from the Options pull-down menu.

You have limited control over a user’s ability to write to all other portions of any user profile (all other items on the Options pull-down menu). The table below shows which profile access authorities you can specify for those portions of a profile that you can control. The authorizations possible are dependent upon whether a user has OMEGAMON II system administrator authority.

<table>
<thead>
<tr>
<th>If the user...</th>
<th>Then you can specify...</th>
</tr>
</thead>
<tbody>
<tr>
<td>has system administrator authority</td>
<td>■ read/write access to the user’s own profiles.</td>
</tr>
<tr>
<td></td>
<td>■ read/write access to other users’ profiles.</td>
</tr>
<tr>
<td></td>
<td>■ read/write access to your site’s default profile, DEFAULT.</td>
</tr>
<tr>
<td>does not have system administrator authority</td>
<td>■ read/write access or read-only access to the user’s own profiles.</td>
</tr>
<tr>
<td></td>
<td>■ read/write access or read-only access to other users’ profiles.</td>
</tr>
<tr>
<td></td>
<td>■ read-only access to your site’s default profile, DEFAULT.</td>
</tr>
</tbody>
</table>

As the table illustrates, only users with OMEGAMON II system administrator authority can modify your site’s default profile.

In addition to controlling a user’s write access to their own or other users’ profiles on a wholesale basis, you can also specify by name the particular profiles an individual user or user group can access.

Why limit write access to profiles?

You may want to limit the write access privileges of users in order to prevent the number of user profiles at your site from becoming unmanageable.
Controlling Access to User Profiles

Limiting write access results in fewer user profiles at your site, thus providing a more unified view of MVS system performance across the user community.

How to grant or deny authority

Follow these steps to grant or deny users the authority to create or modify their own or other users’ profiles. You must have system administrator authority to perform these steps.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter fast path <strong>oup</strong> in the input field of the action bar on any OMEGAMON II panel.</td>
</tr>
<tr>
<td>2</td>
<td>Follow the instructions on the <strong>Specify Profile Authorities Group</strong> pop-up window to grant or deny a user or user group the authority to write user profiles.</td>
</tr>
<tr>
<td>3</td>
<td>Once you have given a user or user group write access to a set of user profiles in Step 2, you can follow the instructions on the <strong>Set User and Profile IDs</strong> pop-up window to further limit them to a subset of that set.</td>
</tr>
</tbody>
</table>

The next time the user or users log on to OMEGAMON II, their profile access will be as you specified.

**Note:** A user with system administrator authority retains read/write access to all profiles regardless of the access that you specify in this procedure.
Specifying a User’s Startup Profile

What is a startup profile?

A user’s startup profile is the profile (set of realtime and user-interface controls) that is automatically in effect when the user logs on to OMEGAMON II. A startup profile can be either the default site profile or a user profile. By default, a user’s startup profile has the same name as the user’s user ID.

How to specify a startup profile

Follow these steps to specify the startup profile for a user or group of users. You must have system administrator authority to perform these steps.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter fast path <strong>oup</strong> in the input field of the action bar on any OMEGAMON II panel.</td>
</tr>
<tr>
<td>2</td>
<td>Follow the instructions on the <strong>Specify Profile Authorities Group</strong> pop-up window to name the startup profile for a user or user group.</td>
</tr>
</tbody>
</table>

The next time the user or users log on to OMEGAMON II, the startup profile you specified will be in effect. A user can later change his or her startup profile specification, so that the one you specified is no longer in effect.
Appendix Overview

This appendix contains information about the terminology used in this guide.

Terminology

The following terminology is used throughout this document:

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candle Subsystem</td>
<td>The component that runs on MVS 4.2 and above systems to provide dynamic device activity data to multiple Candle products.</td>
</tr>
<tr>
<td>Candle Management Server (CMS)</td>
<td>The component that provides data services (data server) and data communications services (location broker) to Candle products running on MVS 5.1 or above systems. This component was formerly referred to as Candle Technologies™, CT, CT/Data Server™, and CT/DS.</td>
</tr>
<tr>
<td>CECS</td>
<td>Candle Electronic Customer Support. CECS enables you to search for existing questions/answers, problems/fixes, PSP information, and open incidents for Candle products.</td>
</tr>
<tr>
<td>CICAT</td>
<td>Candle Installation/Customization Assistance Tool. A method used to customize and configure OMEGAMON II. CICAT provides ISPF panels that automate and simplify the configuration process.</td>
</tr>
<tr>
<td>CL/Engine</td>
<td>The component that provides the user and VTAM interfaces for OMEGAMON II. The default is started task name you specified for OMEGAMON II for MVS using CICAT.</td>
</tr>
<tr>
<td>Common component</td>
<td>A component of OMEGAMON II that is also used by other Candle products.</td>
</tr>
<tr>
<td>CSA Analyzer</td>
<td>The component that provides common storage usage information to OMEGAMON II.</td>
</tr>
<tr>
<td>CMS</td>
<td>Abbreviation for the Candle Management Server.</td>
</tr>
<tr>
<td>Datastore</td>
<td>The EPILOG for IMS component uses VSAM datasets called datastores (also known as EDS) for its historical data. These datastores are used by both the collector (for recording data) and the reporter (for reporting data).</td>
</tr>
</tbody>
</table>
Dedicated mode (OMEGAMON for MVS and OMEGAMON II for MVS) can run on a dedicated terminal to provide highest availability. In this mode, OMEGAMON does not rely on VTAM; it communicates via the execute channel program (EXCP). A dedicated OMEGAMON can report hardware and software problems so severe that they disable other mechanisms, including MVS system consoles.

DEXAN™

An additional feature of OMEGAMON for MVS that performs degradation analysis.

EDS

EDILOG for IMS Datastore. See datastore.

End-to-End

The component that collects and calculates end-to-end response time for OMEGAMON II.

EP

Abbreviation of EDILOG for MVS.

EDILOG for MVS

The component that provides historical data to OMEGAMON II. EDILOG includes both a collector and the reporter. (The default is the started task name you specified for the historical data collector using CICAT.)

Historical Data Collector

EDILOG for MVS data collector.

OM

Abbreviation of OMEGAMON for MVS.

OMEGAMON for MVS

The component that provides realtime data to OMEGAMON II and command-level security services. The default is the started task name you specified for the realtime collector using CICAT.

PSP

Preventive Service Planning Facility. The PSP provides the latest service recommendations for OMEGAMON II (and all other Candle products).

Realtime Collector

OMEGAMON for MVS data collector.

Security: Command level

Command level security prevents the unauthorized use of sensitive OMEGAMON for MVS commands.

Security: External

External security is any other security package (RACF, CA-ACF2, or CA-TOP SECRET) used to control access at the product level and/or command level.

Security: Internal

Internal security is the stand-alone OMEGAMON II security system (NAM) that can be used to control access at the product level and/or command level.

Security: Product level

Product level security provides user ID and password validation to prevent unauthorized access to OMEGAMON II, starting with the System Status panel.

Shared CSI

Installation of multiple Candle products into one CSI (common SMP/E target and distribution zones).

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated mode (OMEGAMON for MVS and OMEGAMON II for MVS)</td>
<td>OMEGAMON for MVS and OMEGAMON II for MVS can run on a dedicated terminal to provide highest availability. In this mode, OMEGAMON does not rely on VTAM; it communicates via the execute channel program (EXCP). A dedicated OMEGAMON can report hardware and software problems so severe that they disable other mechanisms, including MVS system consoles.</td>
</tr>
<tr>
<td>DEXAN™</td>
<td>An additional feature of OMEGAMON for MVS that performs degradation analysis.</td>
</tr>
<tr>
<td>EDS</td>
<td>EDILOG for IMS Datastore. See datastore.</td>
</tr>
<tr>
<td>End-to-End</td>
<td>The component that collects and calculates end-to-end response time for OMEGAMON II.</td>
</tr>
<tr>
<td>EP</td>
<td>Abbreviation of EDILOG for MVS.</td>
</tr>
<tr>
<td>EDILOG for MVS</td>
<td>The component that provides historical data to OMEGAMON II. EDILOG includes both a collector and the reporter. (The default is the started task name you specified for the historical data collector using CICAT.)</td>
</tr>
<tr>
<td>Historical Data Collector</td>
<td>EDILOG for MVS data collector.</td>
</tr>
<tr>
<td>OM</td>
<td>Abbreviation of OMEGAMON for MVS.</td>
</tr>
<tr>
<td>OMEGAMON for MVS</td>
<td>The component that provides realtime data to OMEGAMON II and command-level security services. The default is the started task name you specified for the realtime collector using CICAT.</td>
</tr>
<tr>
<td>PSP</td>
<td>Preventive Service Planning Facility. The PSP provides the latest service recommendations for OMEGAMON II (and all other Candle products).</td>
</tr>
<tr>
<td>Realtime Collector</td>
<td>OMEGAMON for MVS data collector.</td>
</tr>
<tr>
<td>Security: Command level</td>
<td>Command level security prevents the unauthorized use of sensitive OMEGAMON for MVS commands.</td>
</tr>
<tr>
<td>Security: External</td>
<td>External security is any other security package (RACF, CA-ACF2, or CA-TOP SECRET) used to control access at the product level and/or command level.</td>
</tr>
<tr>
<td>Security: Internal</td>
<td>Internal security is the stand-alone OMEGAMON II security system (NAM) that can be used to control access at the product level and/or command level.</td>
</tr>
<tr>
<td>Security: Product level</td>
<td>Product level security provides user ID and password validation to prevent unauthorized access to OMEGAMON II, starting with the System Status panel.</td>
</tr>
<tr>
<td>Shared CSI</td>
<td>Installation of multiple Candle products into one CSI (common SMP/E target and distribution zones).</td>
</tr>
</tbody>
</table>
Appendix Overview

You will need to use a security exit routine if you are using OMEGAMON for MVS command-level security with any of the following products:

- RACF
- CA-ACF2
- CA-TOP SECRET

This appendix describes the processing logic for the exit routines.

Sample exit routines

<table>
<thead>
<tr>
<th>If you use this product...</th>
<th>See this sample exit routine...</th>
</tr>
</thead>
<tbody>
<tr>
<td>RACF</td>
<td><code>rhilev.midlev.RKANSAM(KOMRACFX)</code></td>
</tr>
<tr>
<td>CA-TOP SECRET</td>
<td><code>rhilev.midlev.RKANSAM(KOMRACFX)</code></td>
</tr>
<tr>
<td>CA-ACF2</td>
<td><code>rhilev.midlev.RKANSAM(KOMACF2X)</code></td>
</tr>
</tbody>
</table>

$UCHECK

Communication between OMEGAMON for MVS and the exit routine is done through the control block $UCHECK and exit return codes. The control block $UCHECK is mapped by the macro `rhilev.midlev.TKANMAC(KOBGMAC).OMEGAMON` for MVS maintains the $UCHECK control block for the entire life of the session.

At the end of $UCHECK is a 512-byte work area set up for your installation’s own use. If you require a work area larger than 512 bytes, GETMAIN additional storage and place a pointer to this storage in $UCHECK. If you modify the RACF RACROUTE macro, you must GETMAIN at least 512 bytes for use as the WORKA parameter.
# Initialization exit call sequence

The following steps describe the sequence of exit calls done at initialization:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At initialization, when OMEGAMON passes control to the exit routine, the initialization call is indicated by an I in the U#CHTYP field. This indicates a logon validation request.</td>
</tr>
<tr>
<td>2</td>
<td>If the user ID field length is non-zero, the user ID and password information are available.</td>
</tr>
<tr>
<td>3</td>
<td>If additional information or some form of retry is required, the routine can request a reshow of the screen, and reset any field lengths to indicate that no data is present (user ID, password, group, or new password).</td>
</tr>
<tr>
<td>4</td>
<td>To perform a reshow in VTAM mode, set a message into the U#CHMSG field (120 bytes maximum length), set the U@CHRSHO bit in U#CHRESP, and return to the caller. The message appears below the panel. Appropriate fields are filled in (original user ID and password), unless overridden (length = 0).</td>
</tr>
<tr>
<td>5</td>
<td>When validation is complete, a return code of 0 from the user exit indicates that the user should be allowed to log on. Any other return code will cause the session to be aborted.</td>
</tr>
<tr>
<td>6</td>
<td>Upon successful logon acceptance, the exit may perform resource validation and optionally assign a command security level (0, 1, 2, or 3) to the user (default is 0). Place the appropriate number into U#CHAUT4. To lock the user to this level, also set the U@CH1LOK bit in U#CHAUT1.</td>
</tr>
</tbody>
</table>

# Command verification exit call sequence

The following steps describe the sequence of exit calls done at command verification:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>During command verification, OMEGAMON places a C in the U#CHTYP field.</td>
</tr>
<tr>
<td>2</td>
<td>The user’s authorization can be checked.</td>
</tr>
<tr>
<td>3</td>
<td>The decision to allow or disallow a command on the first encounter cannot be changed on subsequent tries by the same user, unless security is reset with the /PWD command. However, on each try, the user exit is notified; an audit record may be written, and a customized error message may be issued. Return codes from the exit routine may be:</td>
</tr>
</tbody>
</table>

- **0** Indicates that the command is allowed.
- **4** RACF only: Indicates that the command is unknown to RACF. OMEGAMON will allow the command to execute.
- **8** Indicates that the command is known to the external security package, and access is denied.
When you authorize commands, OMEGAMON modifies the command name by replacing the slash of INFO-line commands with a dollar sign (/cccccc becomes $cccccc), and the period of immediate commands with @ (.ccc becomes @ccc).

**Relogon exit call sequence**

The following steps describe the sequence of exit calls done at relogon:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At relogon, OMEGAMON places an R in the U#CHTYP field to indicate a logon validation.</td>
</tr>
<tr>
<td>2</td>
<td>The processing is the same as at initialization time, except that users may not enter a new password or group because OMEGAMON does not display a logon panel.</td>
</tr>
</tbody>
</table>

**Termination exit call sequence**

The following steps describe the sequence of exit calls done at termination:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At termination, OMEGAMON passes a T to the user’s exit routine.</td>
</tr>
<tr>
<td>2</td>
<td>You can then do any termination cleanup required, such as freeing user control blocks and FREEMAINing any GETMAINed areas.</td>
</tr>
</tbody>
</table>
Appendix Overview

This topic describes the syntax and function of the security control statements used for command-level security.

Rules for control statements

These format rules apply to all control statements:

- Control statements can start in any column but cannot extend beyond column 72.
- Statements cannot be continued to a second line.
- Statements can be in any order in the input stream. The update program processes the statements as it encounters them, with the exception of the LIST and UPDATE statements, which take effect after all other input is processed.
- All input must be in uppercase letters.
- Statements must be in this format:

  CONTROLSTATEMENT=cccccccc,KEYWORD1=cccccccc,KEYWORD2=cccccccc, etc.

There can be no intervening blanks. The update program treats data that follows a blank as a comment. The data prints on the edit listing but is ignored for processing purposes.

- To insert comment lines anywhere in the input stream, place an asterisk (*) in column one of the input record.

AUTHLIB control statement

This control statement specifies the dataset name of an authorized screen space library that contains commands to invoke at OMEGAMON initialization, bypassing any security checks. This option lets you execute protected commands as part of the initialization screen without entering a password.

Since all security checking for screens coming from the AUTHLIB dataset is bypassed, WRITE access to this dataset should be restricted.
Security checking resumes when OMEGAMON fetches a screen from an unauthorized library, or a screen that has been loaded into memory, or when a user enters any keystroke, including a cursor movement.

**Note:** If you create an authorized screen library and use the OMEGAMON menu system, security checking will cause initialization to fail when:

- OMEGAMON fetches a screen containing an authorized command. Menu system users should leave the .FGO and .VAR commands unprotected.
- OMEGAMON fetches a screen space that has been loaded into memory. Alias name @ZSCRNDF is the screen that loads screen spaces into memory.

### Statement syntax

AUTHLIB=dsname,VOL={volume|NOVOLUME}  

where \textit{dsname} is the name of the authorized screen library you have created.

#### Keywords  

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOL</td>
<td>Specifies the volume serial where the specified dataset resides. This acts as an additional security measure. You may specify a volume serial number even if the dataset is cataloged. The AUTHLIB statement always requires the VOL keyword. If you do not want the additional volume serial number checking to be performed, specify NOVOLUME.</td>
</tr>
</tbody>
</table>

Concatenate the dataset containing the authorized screens in your RKOMPROC DD statement.

The dataset that contains the authorized screen libraries is not an APF-authorized dataset.

### COMMAND control statement

This control statement specifies the name of an OMEGAMON major, immediate, or INFO-line command to be protected. Minor commands are protected at the major command level unless the MINOR control statement is specified.

When you update an INFO-line command, you must use the actual command name and not its alias. OMEGAMON automatically assigns the same protection attributes to all aliases of the command.
OMEGAMON does not check for multiple COMMAND statements for the same command in the same run. The last COMMAND statement for the command is the one that OMEGAMON processes.

**Statement syntax**

```
COMMAND= {cccc|.ccc|/cccccc} 
[,.LEVEL={0|1|2|3|DISABLE}] 
[,.EXTERNAL={YES|NO}] 
[,.AUDIT={WTO|SMF|BOTH|NONE}]
```

where cccc, .ccc, or /cccccc is the name of the OMEGAMON command to be protected.

<table>
<thead>
<tr>
<th>Keywords</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEVEL</strong></td>
<td>Specifies the internal security level to be associated with this command. Level 0 allows the command to execute without an internal security check. Levels 1, 2, and 3 specify that the command executes only if you have previously entered the corresponding password for that level (or for a higher level) via the /PWD INFO-line command. DISABLE specifies that OMEGAMON is never to execute the command. You can audit attempts to execute the command for the session, but you cannot specify internal or external security.</td>
</tr>
<tr>
<td><strong>EXTERNAL</strong></td>
<td>Specifies whether an external security package checks this command. If you code EXTERNAL=YES for a command and no exit routine is available, OMEGAMON disable the command for the session if it has an associated security level of 0, or defaults to internal security if the command has a security level of 1, 2, or 3. Once you specify EXTERNAL=YES, you can change it only if you specify EXTERNAL=NO and rerun the security update program.</td>
</tr>
<tr>
<td><strong>AUDIT</strong></td>
<td>Specifies whether OMEGAMON is to audit the command each time a user invokes it. If you specify an audit for a disabled command, you are notified of attempts to execute it. The possible values are:</td>
</tr>
<tr>
<td><strong>WTO</strong></td>
<td>Produces a one-line message on the master console.</td>
</tr>
<tr>
<td><strong>SMF</strong></td>
<td>Specifies that OMEGAMON write an SMF record. The SMF record number must be specified in the SMFNUM control statement. If the SMF audit cannot be performed, OMEGAMON defaults to a WTO audit. See the SMFNUM control statement for information about using the SMF audit. This option requires APF authorization.</td>
</tr>
</tbody>
</table>
LIST control statement

This control statement specifies whether the update program produces a security file listing. A security file listing is a complete record of the security table that shows the name of the authorized screen library, its volume serial number, the name of the user exit module, and all command names along with their corresponding security information. It does not list the internal security passwords.

If you also specify UPDATE=NO, the listing shows what the control statements and security information would look like if the update had taken place.

To generate the security file listing independent of edits to the control statements, you may submit LIST=YES as the only control statement in the input stream.

Statement syntax

LIST={YES|NO}

MINOR control statement

This control statement specifies the name of an OMEGAMON minor command to protect. OMEGAMON protects the minor commands independent of the majors. Therefore, any changes to minor commands apply to all minors with the same name and attributes, regardless of their major commands.

Access to a minor command requires access to the appropriate major command. If you do not specify an EXTERNAL keyword, the associated major controls access to this minor command.

No check is made for multiple MINOR statements for the same minor command in the same run. The last MINOR statement for the minor takes effect.

Statement syntax

MINOR=cccc [,LEVEL={1|2|3|DISABLE}] [,EXTERNAL={YES|NO}] [,AUDIT={WTO|SMF|BOTH|NONE}]

where cccc is the name of the minor command to be protected. Refer to the COMMAND control statement for explanations of other keywords.

BOTH Specifies that OMEGAMON issue a WTO message to a console and write an SMF record.

NONE Specifies no auditing. This is the default setting.
MODULE control statement
This control statement specifies the name of the module that contains the user’s external security exit routine. You must specify this parameter for an external security check to take place. There is no default.

**Statement syntax**

```
MODULE=cccccccc
```

where `cccccccc` is the name of the module that contains the user’s external security exit routine. Be sure that this name matches the load module name you specified in KOMACF2A or KOMRACFA.

To remove control from external security, blank out the value of `MODULE=`, run the security update job, and restart OMEGAMON.

PASSWORD control statement
This control statement specifies the 1- to 8-character password for each internal security level, to be used with the `/PWD` command. Use a unique password for each security level. If you assign the same password to more than one level, OMEGAMON will match it only at the lowest level, and deny access to commands protected at higher levels.

When you enter a valid password for one security level, OMEGAMON allows access to commands secured at that level and at lower levels. OMEGAMON checks the password for a match in the following order:

Level 1
Level 2
Level 3

**Statement syntax**

```
PASSWORD=password,LEVEL={1|2|3|}
```

where `password` is the unique password for this level.

**Keywords**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL</td>
<td>Specifies the security level associated with this password. Levels 1, 2, and 3 specify that the command executes only if you have previously entered the corresponding password for that level (or for a higher level) via the <code>/PWD</code> INFO-line command. A level is always required for a password.</td>
</tr>
</tbody>
</table>

RESET control statement
This control statement clears the current settings of the other control statements. Reset commands remain unprotected unless you specify new
settings with the appropriate control statements and rerun the update program.

Only one RESET statement is allowed per run.

**Statement syntax**

```plaintext
Reset \( T = \) ccc ccc cc
```

where cccccc is one of the following arguments.

- **ALL**: Clears settings for all control statements and all keywords in the OMEGAMON security table.
- **AUTHLIB**: Clears the name and volume serial number of the authorized library.
- **INFO**: Clears settings for all INFO-line commands (on the COMMAND control statement). For example, if you do not want to use the Candle default security levels for INFO-line commands and want to start over, enter RESET=INFO. For INFO-line commands, this resets all LEVEL settings to security level 0 and clears any existing EXTERNAL and AUDIT settings.
- **MAJOR**: Clears settings for all major and immediate commands (on the COMMAND control statement). See INFO above for an example.
- **MINOR**: Clears settings for all minor commands.
- **MODULE**: Clears the name of the user’s exit routine module.
- **PASSWORD**: Clears the internal passwords.
- **SLASH**: Same as INFO.
- **SMFNUM**: Clears the record number for SMF audits.
- **YES**: Same as ALL.

**SMFNUM control statement**

This control statement indicates the SMF record ID number to be used by OMEGAMON for its audit. Use the SMF audit selectively because of its high overhead. The SMF audit is intended for use only with commands that could disrupt the system (for example, OCMD and MZAP).

When creating the SMF audit, make sure that the SMF Record Exits (IEFU83 and IEFU84) and the SMF system parameters specifications (SMFPRMcc) do not suppress the ability for OMEGAMON to journal the audit activity records.

The KOBSMFRP member of the rhilev.midlev.RKANSAM dataset contains a sample SMF post-processor and report generator in source code format. This is supplied as an example only.
The SMF record consists of:

- The IBM header (mapped by IFASMFR).
- The Candle Corporation Common Header (mapped by $CANHDR, which is defined in member KOBGMAC of rhilev.midlev.RKANSAM).
- The security audit record (mapped by $AUDIT, which is defined in member KOBGMAC of rhilev.midlev.RKANSAM). The audit record contains:
  - A date/time/system stamp.
  - A user ID/jobname associated with the session.
  - Command text as entered on the OMEGAMON screen. Records of minor commands also reference their associated major commands.

**Statement syntax**

SMFNUM=nnn

where nnn is the SMF record ID number. This ID number assigned to OMEGAMON must be between 128 and 255, inclusive, and should be different from that used by any other application. There is no default.

**UPDATE control statement**

This control statement specifies whether OMEGAMON updates the control statements during this run. UPDATE=NO specifies that this run of the security update program should be a trial run.

Only one UPDATE statement is allowed per run.

**Statement syntax**

UPDATE={YES|NO}
Appendix Overview

The security update program produces a listing of the control statement modifications. If you specify the LIST=YES control statement, an additional report is produced that includes all security information.

The security update program listing

The security update program listing consists of four parts.

- Header
- Control Statement Edit Listing
- Security File Listing
- Security Update Program Trace

Information in the header

The header contains the following information:

- The dataset name where the load module resides.
- The name of the module containing the security table (KOMCMnnn).
- The OMEGAMON version number in the format VnnnCOM.
- Messages indicating successful completion of the job or error conditions, such as a failure to open the SYSLIB dataset or read the security table.

The control statement edit listing

The update report contains a listing of the control statements that have been edited. The listing shows the previous contents (except for previous passwords), as well as the new contents. If you specified UPDATE=YES, OMEGAMON reports the date and time of the previous update.

The following figure shows a typical listing.
The codes for the **PREVIOUS CONTENTS** and **NEW CONTENTS** of commands are positional. There are three positions:

1. The first position shows the number of the internal security level or an asterisk (*) if the command has been DISABLED.
2. The second position shows the external security option:
   - **E**: Use external security for this command.
   - **b**: A blank indicates no external security.
3. The third position shows the auditing option:
   - **W**: Audit this command via WTO.
   - **S**: Audit this command via SMF.
   - **B**: Audit this command via WTO and SMF.
   - **b**: A blank indicates no auditing.
The security file listing

If you specify **LIST=**YES anywhere in the input stream, the security update program generates a complete listing of the security information, including the name of the authorized screen library and its volume serial number, the name of the external security user exit module, the SMF record number, and all of the commands along with their security information. The listing does not show the internal security passwords.

**FIGURE 7. Security File Listing**

```
KOBSUPDT 1.2--OMEGAMON SECURITY UPDATE PROGRAM--(c) CANDLE CORPORATION-- 9/9/99 16:41
* * * SECURITY FILE LISTING * * *

AUTHLIB=rhilev.midlev.RKOMPROC VOLUME=NOVOLUME
LEVEL1=******* LEVEL2=******* LEVEL3=*******
SMFNUM=233
MODULE=MYSECURE

COMMAND= /A 0 TYPE=S (ALIAS)
COMMAND= /ABORT 0 TYPE=S
COMMAND= /AUP 0 TYPE= S
COMMAND= .AUP 0 TYPE= I
COMMAND= .DSA 0 TYPE= I
COMMAND= .SCC * TYPE= I
COMMAND= OCMD 3EB TYPE= I

SECURITY TABLE LAST UPDATED ON 9/9/99 06:00:10
```

**TYPE** specifies the following kinds of OMEGAMON commands:

- **C** Major
- **I** Immediate
- **S** Slash (INFO-line)

The security level follows the command. An asterisk (*) indicates that a command has been disabled. Minor commands are listed below their corresponding majors.
A security update program trace

The last part of the listing indicates whether an update has successfully completed.

The following figure shows a typical trace:

**FIGURE 8. Security Update Program Trace**

```plaintext
KOBSUPDT 1.2--OMEGAMON SECURITY UPDATE PROGRAM--(c) CANDLE CORPORATION-- 9/9/99 16:41

OB9145 OBSELW00 CALLED TO WRITE KOMCMnnn
OB9148 SYSLIB DCB CLOSED SUCCESSFULLY
OB9147 LOAD MODULE TEXT SUCCESSFULLY UPDATED
OB9150 SYSLIB DCB CLOSED
OB9269 KOBSUPDT ENDED
```
Appendix Overview

This topic provides supplemental information about:

- the VTAM major node
- VTAM applids
- terminal support
- Subsystem names used by OMEGAMON II

Some of these elements can be modified from the values set during your installation. The following topics describe which elements can be modified and what updates are required.

**Important**: The members explained here may be modified. Do not modify other members; if you do, unpredictable results may occur.
This topic provides information about OMEGAMON II VTAM elements.

**VTAM major node example**

This is an example of the VTAM major node that gets created during the installation process. The values displayed in the example might not be the exact values in the member at your site.

```
* OMEGAMON II FOR MVS VTAM MAJOR NODE AND APPLIDS
CTDM2N   VBUILD TYPE=APPL
CTDM2AP  APPL  AUTH=(ACQ,NVPACE,PASS,SPO),
          PARSESS=YES,SRBEXIT=YES
CTDM2RC  APPL  AUTH=(ACQ,NVPACE,PASS),SRBEXIT=NO
CTDM2OP  APPL  AUTH=(ACQ,NVPACE,PASS,SPO),
          PARSESS=YES,SRBEXIT=YES
CTDM2VP  APPL  AUTH=(ACQ,NVPACE,PASS,SPO),
          PARSESS=YES,SRBEXIT=YES
CTDM2EZ  APPL  AUTH=(ACQ,NVPACE,PASS),SRBEXIT=NO
CTDM201  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM202  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM203  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM204  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM205  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM206  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM207  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM208  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM209  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM210  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM211  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM212  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM213  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM214  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM215  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM216  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM217  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM218  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
CTDM219  APPL  AUTH=(ACQ,NVPACE),SRBEXIT=YES
```
The OMEGAMON II logon applid

The OMEGAMON II logon applid must be specified in the major node and in
rhilev.midlev.RKANCMD(KM2DLOGS) as follows:
DIALOG **ccccccAP KM2ENTRY**

Where **cccccc** is the 1 to 6 character applid prefix you specified using CICAT.

Also in `rhilev.midlev.RKANCMD(KM2DLOGS)`, the operator applid (default CTDM2OP) is specified as follows:

**DIALOG cccccccOP KLVLOGON**

Where **cccccc** is the 1 to 6 character applid prefix you specified using CICAT.

This applid is used to access OMEGAMON II message traffic information from the RKLVLOG, diagnostic information, and information about individual users. This operator applid must match the applid specified in the major node.

**CL/Engine applids**

CL/Engine applids fall into four categories:

- The OMEGAMON II logon applid
- The operator applid
- The VTAM Programmable Operator (VPO) applid
- The virtual terminal pool applids

In addition to the applid definitions in the major node, you must set up these CL/Engine applids:

- In `rhilev.midlev.RKANPAR(KM2INVPO)`, the VPO applid is specified as follows:
  
  ```
  ccccccVP
  ```

  Where **cccccc** is the 1 to 6 character applid prefix you specified using CICAT.

  This applid can be used by the CL/Engine Operator facility to enable execution of specific VTAM commands. It does not have a user interface that you can log on to. The value you specify must match the value on the ACBNAME keyword in the major node.

- In `rhilev.midlev.RKANCMD(KM2DFVSM)`, specify the virtual terminal pool (used by CL/Engine to log on to other applications, such as OMEGAMON and EPILOG for IMS zoom), as follows:

  ```
  VSM DEF $DEFAULT cccccc01 TH(99) LOGMODE(&DEFLMODE) DEFER DEDICATE
  VSM DEF $TSO cccccc01 TH(99) LOGMODE(&DEFLMODE) DEFER PASS
  VSM DEF VIRTPASS cccccc01 TH(99) LOGMODE(&DEFLMODE) DEFER PASS
  VSM DEF VIRTPARS cccccc01 TH(99) LOGMODE(&DEFLMODE) DEFER PARALLEL
  VSM DEF VIRT3270 cccccc01 TH(99) LOGMODE(&DEFLMODE) DEFER
  ```
Where $cccccc$ is the 1 to 6 character applid prefix you specified using CICAT. Default names are $cccccc01$ through $cccccc99$. Operand **TH(99)** causes $cccccc01$ through $cccccc99$ to be used as the default virtual terminal pool.

The **OMEGAMON realtime collector applid**

The OMEGAMON realtime collector applid is defined in the following three places. The default is the started task name you specified for realtime collector using CICAT. If you want to change it, you must change it in the following three places:

1. **SYS1.VTAMLST**, in the major node for OMEGAMON II (OMIINODE)
   
   ```
   OMIINODE VBUILD TYPE=APPL
   $cccccccc$ APPL AUTH=(PASS,ACQ),ACBNAME=$cccccccc$,SRBEXIT=NO
   ``
   
   Where $cccccccc$ is the started task name you specified for the realtime collector using CICAT.

   The label $cccccccc$ on the APPL statement (second line) defines the name used for logging onto the application. The ACBNAME keyword is used to open the applid; if this keyword is omitted, the default is the applid name. As shown in the example, the label and the value for the ACBNAME keyword can match.

2. **SYS1.PROCLIB(MIIRCOL)**
   
   ```
   //OMVTAM   PROC APPL=$cccccccc$
   ``
   
   Where $cccccccc$ is the started task name you specified for the realtime collector using CICAT.

   The member (started task name) is the cataloged procedure that starts the OMEGAMON II realtime collector started task. The value for the APPL keyword is the ACB name (started task name); it must match the value for the ACBNAME keyword you specified in SYS1.VTAMLST.

3. **rhilev.midlev.RKANPAR(KM2IPARM)**
   
   ```
   PRI_applid=$cccccccc$
   ``
   
   Where $cccccccc$ is the started task name you specified for the realtime collector using CICAT.

   The value you specify for the PRI_applid keyword (the started task name) must match the label field of the APPL statement in SYS1.VTAMLST.

**Note:** Member KM2IPARM also includes the keywords **ALT_applid** and **ALT2_applid**; these specify other realtime collectors (OMEGAMONs) to try if the logon to the primary realtime collector fails. Normally, these alternates are not necessary.
The zoom-to OMEGAMON applid

OMEGAMON II allows you to zoom to an OMEGAMON session. The applid for the “zoom-to” OMEGAMON is defined in the following places:

1. SYS1.VTAMLST(OMIINODE)
   
   `cccccccc APPL AUTH=(PASS,ACQ),ACBNAME= MIIRCOL,SRBEXIT=NO`

   Where `cccccccc` is the started task name you specified for the realtime collector using CICAT. The label on the APPL statement defines the name used to log on to the application; the ACBNAME keyword is used to open the applid. As shown in the example, the label and the value for ACBNAME can match.

   To specify a different zoom-to-OMEGAMON applid from the one you defined in “The OMEGAMON realtime collector applid” on page 241, duplicate the APPL statement in SYS1.VTAMLST(OMIINODE).

2. `rhilev.midlev.RKANPAR(KM2IPARM)`
   
   `ZOOMOM_APPLID=cccccccc`

   Where `cccccccc` is the started task name you specified for the realtime collector using CICAT.

   The value you specify for the ZOOMOM_APPLID keyword must match the label field of the APPL statement in SYS1.VTAMLST.

The zoom-to EPILOG for MVS applid

OMEGAMON II permits you to zoom to an EPILOG for IMS session. The applid for the “zoom-to” EPILOG is defined in the following three places:

1. SYS1.VTAMLST(OMIINODE)
   
   `cccccccccccc APPL AUTH=(PASS,ACQ),ACBNAME=cccccccc,SRBEXIT=NO`

   Where `cccccccccccc` is the started task name you specified for Zoom-to-EPILOG using CICAT.

2. `rhilev.midlev.RKANPAR(cddddddd)`
   
   `cccccccccccc` is the started task identifier of the zoom-to-EPILOG task.

   `START SESSION,PGM=KEPVTDI,ID=EPDIR`
   `START OBVTAM,OM=KEBVTMC,APPL=cccccccccccc`

   Where `cccccccccccc` is the started task name you specified for Zoom-to-EPILOG using CICAT.

   These two statements specify the applid for the “zoom-to” EPILOG session in the START command for OBVTAM. The value on the APPL keyword specifies the EPILOG applid; it must be the same as the label field of the APPL statement in SYS1.VTAMLST.

3. `rhilev.midlev.RKANPAR(KM2IPARM)`
   
   `ZOOSEP_APPLID=cccccccccccc`
Where cccccccc is the started task name you specified for Zoom-to-EPILOG using CICAT.

**Note:** If you use the applid from outside OMEGAMON II, you must log on using a terminal with extended attribute support.

**VTAM terminal support and logmodes**

OMEGAMON II uses terminal sessions to establish connections between itself and its users. In addition to simulating physical terminals, virtual terminals support many sessions on behalf of many users.

To establish a virtual session, VTAM must find the matching logmode entry specified during the logon request. This entry is in a VTAM logmode table defined by your VTAM systems programmer; the default logmode table supplied by IBM is member ISTINCLM.

If you need to provide additional logmodes for terminal support that are not found in ISTINCLM, or if you have another logmode table in use at your site, you can add a parameter to the APPL statements in your VTAM major node to point to another logmode table. In the following example, logmode table KLVINCLM will be searched before the IBM default logmode table ISTINCLM:

```
TERM0001 APPL
   AUTH=(ACQ,NVPACE),SRBEXIT=YES,MODETAB=KLVINCLM

TERM0002 APPL
   AUTH=(ACQ,NVPACE),SRBEXIT=YES,MODETAB=KLVINCLM
```

A sample logmode table is contained in `rhilev.midlev.RKANSAM(KLVINCLM)`. You may need logmode entries from this table if compatible logmodes do not exist in your current VTAM logmode table.
This topic describes rhilev.midlelv.RKANPAR(KM2IPARM) parameters, defaults, and processing implications.

**Descriptions**

Table 18. Parameters in Member KM2IPARM

<table>
<thead>
<tr>
<th>Parameter and Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRI_APPLID=cccccccc (where ccccccc is the started task name you specified for the realtime collector using CICAT)</td>
<td>Applid used by OMEGAMON II to establish the collector session from which information is extracted.</td>
</tr>
<tr>
<td>ALT_APPLID=cccccccc (where ccccccc is the started task name you specified for the realtime collector using CICAT)</td>
<td>Alternate applid used when PRI_APPLID is not available.</td>
</tr>
<tr>
<td>ALT2_APPLID=cccccccc (where ccccccc is the started task name you specified for the realtime collector using CICAT)</td>
<td>Alternate applid used when ALT_APPLID is not available.</td>
</tr>
<tr>
<td>LOCAL_APPLID=ccccccEQ</td>
<td>OMEGAMON II local applid used by Candle Management Server to connect to OMEGAMON II.</td>
</tr>
<tr>
<td>REMOTE_APPLID=ccccccDS</td>
<td>Candle Management Server applid used by OMEGAMON II to connect to the CMS.</td>
</tr>
<tr>
<td>DLOCAL_APPLID=ccccccED1</td>
<td>OMEGAMON II dedicated address space applid used to connect to the CMS.</td>
</tr>
<tr>
<td>ZOOMOM_APPLID=cccccccc Where ccccccccc is the started task name you specified for the realtime collector using CICAT.</td>
<td>Applid used for zooming to OMEGAMON.</td>
</tr>
<tr>
<td>ZOOMEPP_APPLID=cccccccc Where ccccccccc is the started task name you specified for Zoom-to-EPILOG using CICAT.</td>
<td>Applid used for zooming to EPILOG for IMS.</td>
</tr>
<tr>
<td>PROFILE=M2</td>
<td>OMEGAMON profile that is used to migrate exception thresholds to the OMEGAMON II profile.</td>
</tr>
<tr>
<td>LROWS=999</td>
<td>Logical rows setting for the realtime collector session started by OMEGAMON II.</td>
</tr>
<tr>
<td>RULE=KM2RULES</td>
<td>Commands used by OMEGAMON II to get data from OMEGAMON; do not change this line.</td>
</tr>
<tr>
<td>LOG=NO</td>
<td>Indicates whether you want the realtime collector session command output to be logged. Enter YES or NO.</td>
</tr>
<tr>
<td>DEBUG=NO</td>
<td>Indicates whether you want to produce diagnostic output for problem determination. Enter YES or NO.</td>
</tr>
</tbody>
</table>
# MVS Subsystem Names

This topic describes the MVS subsystem IDs used in OMEGAMON II.

## Description

<table>
<thead>
<tr>
<th>Subsystem ID</th>
<th>Subsystem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>####</td>
<td>The OMEGAMON II to EPILOG for IMS cross-memory services subsystem. If you need to change this subsystem ID, see “Specifying a Subsystem Name for Historical Reporting” on page 68.</td>
</tr>
<tr>
<td>CNDL</td>
<td>The Candle Subsystem that runs on MVS 4.2+ systems to provide data to multiple Candle products. If you need to change this subsystem ID, see the Install Candle Subsystem option for Configure OMEGAMON II for MVS / RTE in CICAT.</td>
</tr>
<tr>
<td>VTxx</td>
<td>The End-to-End subsystem that provides response data to multiple Candle products.</td>
</tr>
<tr>
<td>CSAA</td>
<td>The subsystem used by the CSA Analyzer.</td>
</tr>
</tbody>
</table>
Introduction

Candle Corporation is committed to producing top-quality software products and services. To assist you with making effective use of our products in your business environment, Candle is also committed to providing easy-to-use, responsive customer support.

Precision, speed, availability, predictability—these terms describe our products and Customer Support services.

Included in this Guide to Candle Customer Support is information about the following:

Base Maintenance Plan ........................................... 248
  – Telephone Support
  – eSupport
  – Description of Severity Levels
  – Service-level objectives
  – Recording and monitoring calls for quality purposes
  – Customer Support Escalations
  – Above and Beyond

Enhanced Support Services ........................................ 252
  – Assigned Support Center Representative (ASCR)
  – Maintenance Assessment Services (MAS)
  – Multi-Services Manager (MSM)

Customer Support Contact Information ............................. 254
  – Link to Worldwide Support Telephone and E-mail information
Overview

Candle offers a comprehensive Base Maintenance Plan to ensure that you realize the greatest value possible from your Candle software investments. We have more than 200 technicians providing support worldwide, committed to being responsive and to providing expedient resolutions to support requests. Technicians are available worldwide at all times during the local business day. In the event of an after-hours or weekend emergency, our computerized call management and forwarding system will ensure that a technician responds to Severity One situations within one hour. For customers outside of North America, after-hours and weekend support is provided in English language only by Candle Customer Support technicians located in the United States.

Telephone support

Candle provides consistently reliable levels of service—thanks to our worldwide support network of dedicated experts trained for specific products and operating systems. You will always work with a professional who truly understands your problem.

We use an online interactive problem management system to log and track all customer-reported support requests. We give your support request immediate attention by routing the issue to the appropriate technical resource, regardless of geographic location.

**Level 0 Support** is where your call to Candle Customer Support is first handled. Your support request is recorded in our problem management system, then transferred to the appropriate Level 1 support team. We provide Level 0 manual interaction with our customers because we support more than 170 products. We feel our customers would prefer personal interaction to a complex VRU or IVR selection menu.

**Level 1 Support** is the service provided for initial support requests. Our Level 1 team offers problem determination assistance, problem analysis, problem resolutions, installation assistance, and preventative and corrective service information. They also provide product usage assistance.

**Level 2 Support** is engaged if Level 1 cannot provide a resolution to your problem. Our Level 2 technicians are equipped to analyze and reproduce errors or to determine that an error is not reproducible. Problems that cannot be resolved by Level 2 are escalated to Candle’s Level 3 R&D support team.

**Level 3 Support** is engaged if a problem is identified in Candle product code. At Level 3, efforts are made to provide error correction, circumvention or notification that a correction or circumvention is not available. Level 3 support provides available maintenance modifications.
and maintenance delivery to correct appropriate documentation or product code errors.

**eSupport**

In order to facilitate the support process, Candle also provides **eSupport**, an electronic full-service information and customer support facility, using the World Wide Web at www.candle.com/support/. **eSupport** allows you to open a new service request and update existing service requests, as well as update information in your customer profile. New and updated service requests are queued to a support technician for immediate action. And we can respond to your request electronically or by telephone—it is your choice.

**eSupport** also contains a continually expanding knowledge base that customers can tap into at any time for self-service access to product and maintenance information.

The Candle Web Site and **eSupport** can be accessed 24 hours a day, 7 days a week by using your authorized Candle user ID and password.

**Description of Candle severity levels**

Responses to customer-reported product issues and usage questions are prioritized within Candle according to Severity Code assignment. Customers set their own Severity Levels when contacting a support center. This ensures that we respond according to your individual business requirements.

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Severity 1</strong></td>
<td>A crisis affects your ability to conduct business, and no procedural workaround exists. The system or application may be down.</td>
</tr>
<tr>
<td><strong>Severity 2</strong></td>
<td>A high-impact problem indicates significant business effect to you. The program is usable but severely limited.</td>
</tr>
<tr>
<td><strong>Severity 3</strong></td>
<td>A moderate-impact problem involves partial, non-critical functionality loss or a reasonable workaround to the problem. A “fix” may be provided in a future release.</td>
</tr>
<tr>
<td><strong>Severity 4</strong></td>
<td>A low-impact problem is a “how-to” or an advisory question.</td>
</tr>
<tr>
<td><strong>Severity 5</strong></td>
<td>This is a request for software or documentation enhancement. Our business units review all requests for possible incorporation into a future release of the product.</td>
</tr>
</tbody>
</table>
Candle has established the following service-level objectives:

<table>
<thead>
<tr>
<th>Call Status</th>
<th>Severity 1 Goal</th>
<th>Severity 2 Goal</th>
<th>Severity 3 Goal</th>
<th>Severity 4 Goal</th>
<th>Severity 5 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Call Time to Answer</td>
<td>90% within one minute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1 Response</td>
<td>90% within 5 minutes</td>
<td>90% within one hour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Normal Business Hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2 Response</td>
<td>Warm Transfer</td>
<td>90% within two hours</td>
<td>90% within eight hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Normal Business Hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled follow-up</td>
<td>Hourly or as agreed</td>
<td>Daily or as agreed</td>
<td>Weekly or as agreed</td>
<td>Notification is made when an enhancement is incorporated into a generally available product.</td>
<td>Notification is made when a fix is incorporated into a generally available product.</td>
</tr>
<tr>
<td>(status update)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above information is for guideline purposes only. Candle does not guarantee or warrant the above service levels. This information is valid as of October 1999 and is subject to change without prior notice.

Recording and Monitoring Calls for Quality Purposes

Candle is committed to customer satisfaction. To ensure that our customers receive high levels of service, quality and professionalism, we'll monitor and possibly record incoming and outgoing Customer Support calls. The information gleaned from these calls will help us serve you better. If you prefer that your telephone call with Candle Customer Support in North America not be monitored or recorded, please advise the representative when you call us at (800) 328-1811 or (310) 535-3636.

Customer Support Escalations

Candle Customer Support is committed to achieving high satisfaction ratings from our customers. However, we realize that you may occasionally have support issues that need to be escalated to Candle management. In those instances, we offer the following simple escalation procedure:

If you experience dissatisfaction with Candle Customer Support at any time, please escalate your concern by calling the Candle support location closest to you. Ask to speak to a Customer Support manager. During standard business hours, a Customer Support manager will be available to talk with you or will return your call. If you elect to hold for a manager, you will be connected with someone as soon as possible. If you wish a return call, please tell the Candle representative coordinating your call when you will be available. After contacting you, the Customer Support manager will develop an action plan to
resolve your issue. All escalations or complaints received about support issues are logged and tracked to ensure responsiveness and closure.

**Above and Beyond**

What differentiates Candle’s support services from our competitors? We go the extra mile by offering the following as part of our Base Maintenance Plan:

- Unlimited multi-language defect, installation and operations support
- eSupport using the World Wide Web
- Regularly scheduled product updates and maintenance provided at no additional charge
- Over 200 specialized technicians providing expert support for your Candle products
Enhanced Support Services

Overview

Our Base Maintenance Plan provides a high level of software support in a packaged offering. However, in addition to this plan, we have additional fee-based support services to meet unique customer needs.

The following are some examples of our added-value support services:

- **Assigned Support Center Representative Services (ASCR)**
  - An assigned focal point for managing support escalation needs
  - Proactive notification of available software fixes
  - Proactive notification of product version updates
  - Weekly conference calls with your ASCR to review active problem records
  - Monthly performance reviews of Candle Customer Support service levels
  - Optional on-site visits (extra charges may apply)

- **Maintenance Assessment Service (MAS)**
  - On-site assessment services
  - Advice about product maintenance and implementation
  - Training your staff to develop efficient and focused procedures to reduce overall cost of ownership of your Candle software products
  - Analysis of your Candle product environment: versions, updates, code correction history, incident history and product configurations
  - Reviews to ensure that purchased Candle products and solutions are used effectively

- **Multi-Services Manager (MSM)**
  Multi-Services Manager provides highly valued services to customers requiring on-site full time expertise to complement their technical resources.

  - Dedicated on-site Candle resource (6 months or one year) at your site to help ensure maximum use and effectiveness of your Candle products
  - Liaison for all Candle product support activities, coordination and assistance with implementation of all product updates and maintenance releases
  - Works with your staff to understand business needs and systems requirements
– Possesses technical and systems management skills to enhance your staff’s knowledge and expertise
– Other projects as defined in Statement of Work for MSM services
Customer Support Contact Information

Link to Worldwide Support Telephone and E-mail information

To contact Customer Support, the current list of telephone numbers and e-mail addresses can be found on the Candle Web site, www.candle.com/support/.

Select **Support Contacts** from the list on the left of the page.
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